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# THE AUTOMOBILE

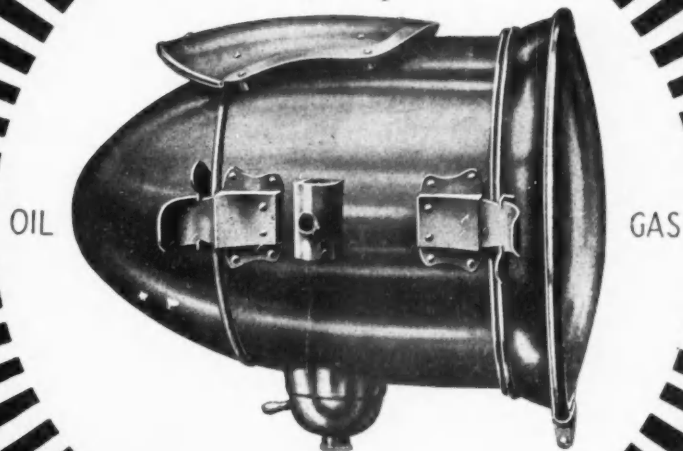
WEEKLY

NEW YORK—THURSDAY, JULY 6, 1905—CHICAGO

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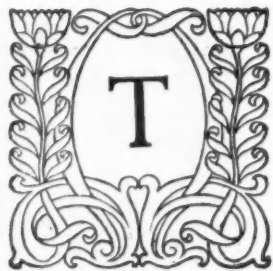
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## The Hartford Perfected Dunlop Tire



TO attain this result, we did not have to provide our Demonstrators with copies of letters from interested dealers damning other types, NOR did we give our men sections cut from rival tires so prepared as to weaken them.

ALL FAIR METHODS having proved futile to stem the wave of popularity THE HARTFORD PERFECTED DUNLOP TIRE now enjoys, ONE COMPETITOR has furnished his salesmen with prejudiced letters and fake sections decrying this tire.

WE welcome honest criticism, but protest against FAKIR methods.

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# THE AUTOMOBILE

VOL. XIII.

NEW YORK—THURSDAY, JULY 6, 1905—CHICAGO

No. 1

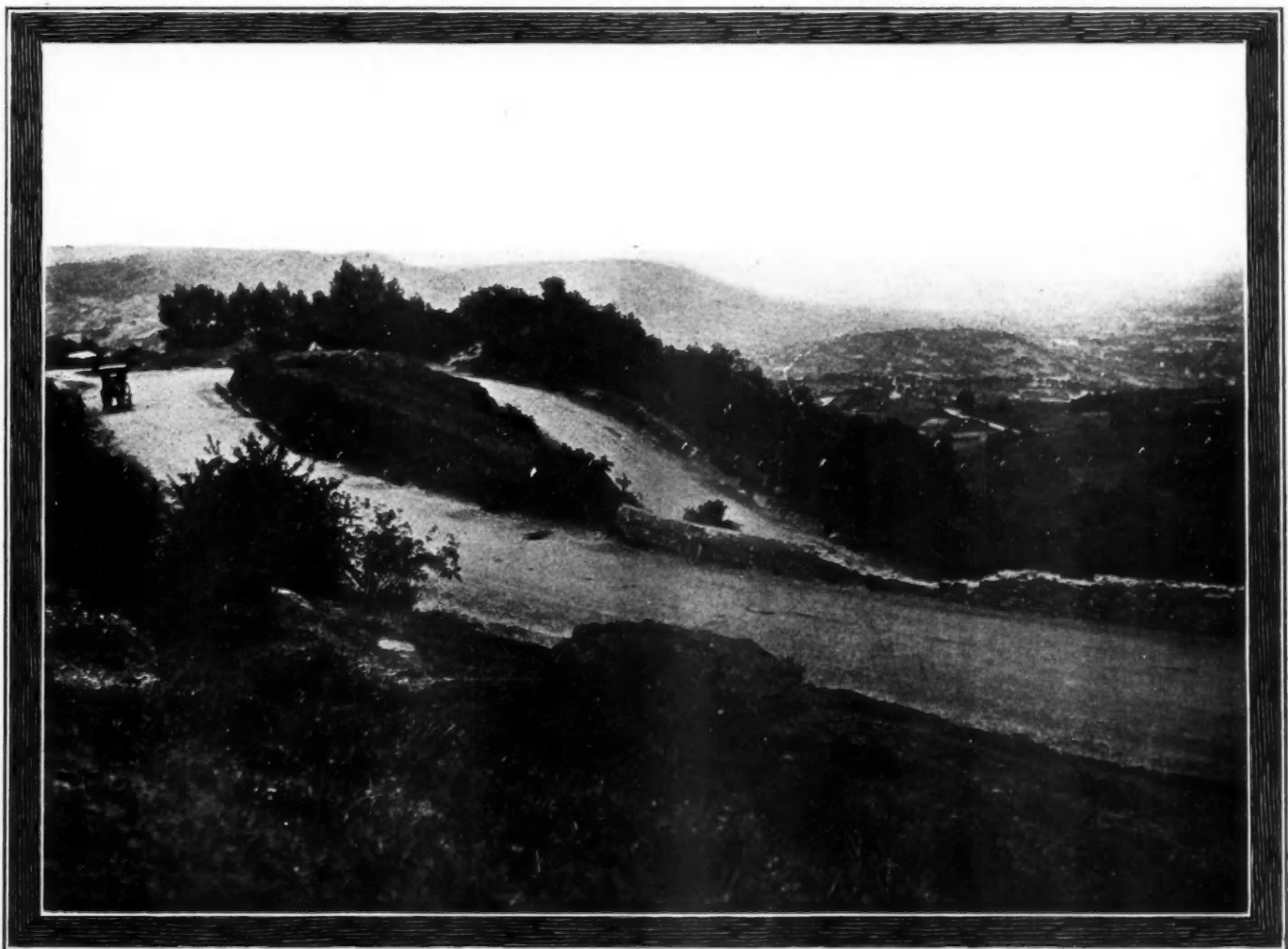
## OVER THE 1905 GORDON BENNETT COURSE.

By W. F. BRADLEY, SPECIAL REPRESENTATIVE OF THE AUTOMOBILE.

CLERMONT FERRAND, June 14.—Herbert Lyttle hooted viciously outside the hotel, for it was 6:30 A. M., or just fifteen minutes past the time ap-

automobile rushed up the steep hill leading to the course. On board, in addition to the two American drivers, are C. B. Myers, of the Diamond Rubber Co., the interpreter

arrived too late to become thoroughly acquainted with the circuit before this prefectorial decision was taken, have now to be content with daily practice over the cir-



A TYPICAL TURN ON THE GORDON BENNETT COURSE—BEFORE THE DESCENT TO CLERMONT, SEEN IN THE DISTANCE.

pointed for the start of a survey of the Gordon Bennett course. Dingley jumped up beside him, the car doors were banged, and the 30-horsepower Pope-Toledo touring

car for the Pope team, and the representative of THE AUTOMOBILE.. The course has been entirely closed to racing cars for the last fortnight, and the American drivers, who

came in their touring car, running the racers only on a quiet stretch of road near the town. Lyttle has only been round the course three times in the racer, and Dingley was



on his third round when the accident occurred at Rochefort the day before the final closing of the circuit, as reported at the time.

Clermont lies in a hollow, picturesquely surrounded by a circle of dome-shaped hills, the most important of which, the Puy de Dôme, rises to a height of 5,000 feet above sea level. About five miles out of town the Four Roads are struck, this being the angle of the circuit nearest to Clermont. We climb up on a road winding sharply round and round the hillside, and having a grade of ten per cent. and a width of about 32 feet.

The first impression of the circuit is almost one of terror. No sooner is the car round a sharp bend to the right than she is swung round to the left, then back again to the right, only to be followed a second later by another sharp turn to the left. All

isolated one, not a house being in sight, and this morning the only persons to be seen were a few workmen engaged on the grand stands. Each side of the road is strongly barricaded for a couple of miles before and beyond the grand stands, and opposite the starter's box a light foot bridge unites the two sides of the road.

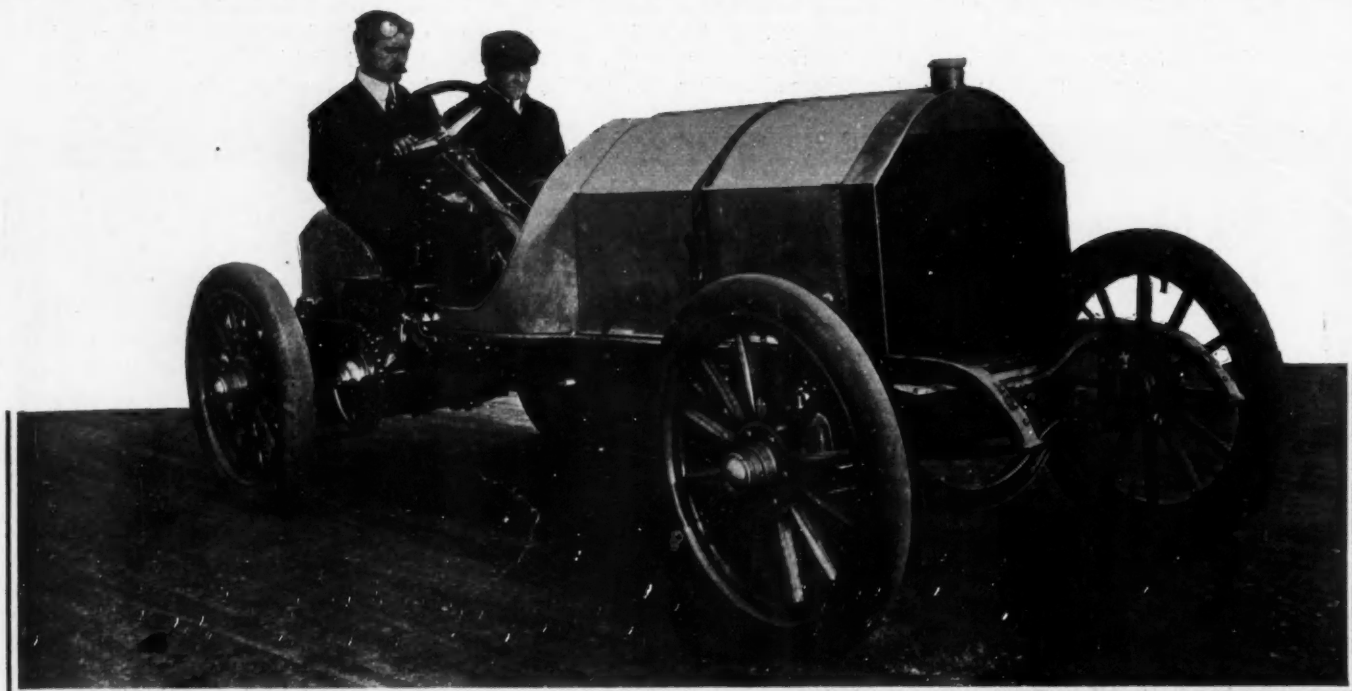
In the villages of Rochefort and Pontgibaud foot bridges have also been constructed over the road, and these, with the exception of an old Roman bridge passing under the road, and which has recently been dug out and rendered fit for use, are the only means of communication between the outside and the inside of the course. Access to the course on the day of the race will be absolutely forbidden to all except a very small number of officials.

From the grand stands to the top of the Col de la Moreno, a distance of three or

car. No less than ten sharp turns, all of them of a most difficult nature, and occurring on 8 to 10 per cent. grades, are encountered between the Col de la Moreno and the village of Rochefort.

It is here that the time control on the circuit has been made. There is, however, no neutralization, all the cars will be held up for five minutes and then started off from the same point. The road through the village is but twenty feet wide, the descent is from 4 to 9 per cent., and at no point can the chauffeur see more than twenty yards ahead. Each side of the track is strongly barricaded by palisadings 5 feet in height, communication on the day of the race being assured by a temporary foot bridge.

Immediately on leaving the village the most difficult turning of the whole circuit has to be negotiated. When this track was discovered many of the most skilled French



JOSEPH TRACY AND AL POOLE, HIS MECHANICIAN IN THE LOCOMOBILE RACER ENTERED BY DR. HAROLD E. THOMAS OF CHICAGO IN THE GORDON BENNETT RACE, AND WHICH WILL START NO. 18.

the time the road is mounting, the round topped Puy de Dôme being right in front, as if blocking the way; and when La Baraque is reached a height of 2,560 feet has been attained. Below, to the left, lies the valley and in it the town of Clermont. The view is magnificent, but it does not keep out the thought that if a car went over the edge of the road it would have a drop of several thousand feet.

From La Baraque the road is comparatively straight for a few miles, and the driver can obtain a few seconds' rest. At no point, however, can one see far ahead, for although the ground is still rising, an occasional dip in the road shuts off the view from time to time.

On this first fast portion of the circuit—on the Plateau de Laschamp—have been erected the official grand stands, about ten miles from Clermont. The spot is a most

four miles, the road is steeply ascending, rising in this short distance from 957 meters to 1,065 meters. This is the highest point on the course, and from it a splendid view is obtained of the surrounding country. In the distance rises dome upon dome, all of them covered with grass up to their summits, hidden here and there by a patch of snow.

Although Clermont is situated in the south of France, in a land of vines and sunshine, this portion of it unites with southern beauties all the features of a northern clime.

Now the road descends, and continues on the down grade for five miles. A couple of miles of straight road follows. Then the car is sharply whizzed round to the right, and before the occupants of the tonneau have slid back to their respective positions a sharp bend to the left throws them all together again in the opposite corner of the

drivers failed to get round the Rochefort bend on the first trial.

Lyttle tackled it in fine style this morning.

He had just got around the V-shaped bend and was straightening out for the 100 yards straight run when the wheels skidded on the wet ground, the engine almost stalled, and the thought came, "Will he be able to hold the car on this greasy 10 per cent. grade?" In a fraction of a second, however, the car had picked up speed again, and before the occupants of the tonneau had wedged themselves again into their own corners it was whirling around another bend.

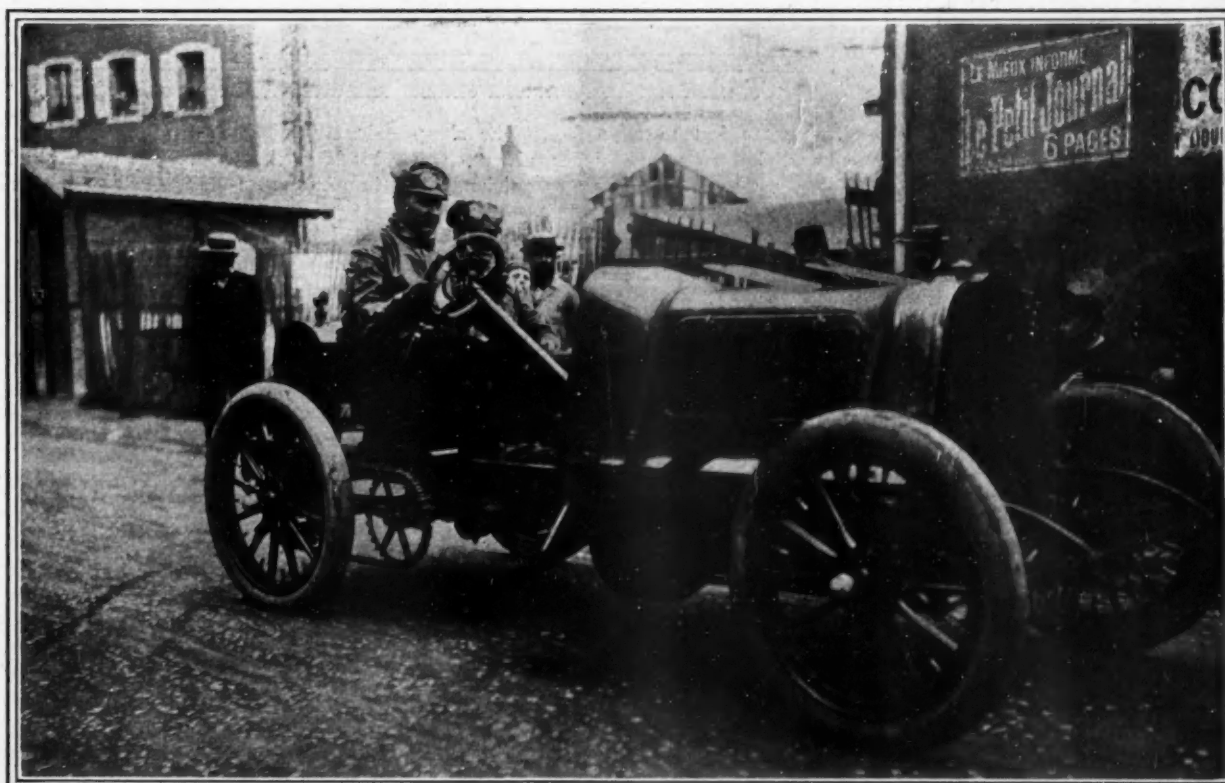
In the village of Laqueuille, situated at an altitude of 1,026 meters, there is a spacing control, and the same protective measures have been taken here as at Rochefort. On the day of the race every car will be



POPE-TOLEDO GORDON BENNETT TEAM PHOTOGRAPHED ON THE COURSE.



G. H. DINGLEY AND J. T. TATTERSALL, HIS MECHANICIAN, ON THE AUVERGNE COURSE IN THE POPE-TOLEDO RACER ENTERED IN THE GORDON BENNETT RACE BY C. T. MUIR, OF LEXINGTON, KENTUCKY, AND WHICH STARTS NO. 12.



HERBERT H. LYTTLE AND WILLIAM KNIPPER, HIS MECHANICIAN, PASSING THROUGH ROCHEFORT IN THE POPE-TOLEDO RACER ENTERED BY COL. ALBERT A. POPE, OF HARTFORD, CONNECTICUT, AND WHICH STARTS NO. 6.

## LIST OF STARTERS IN THE GORDON BENNETT RACE ON THE AUVERGNE CIRCUIT, JULY 5.

No.	Driver.	Car.	Country.	No.	Driver.	Car.	Country.	No.	Driver.	Car.	Country.
1	Thery....	Richard-Brasier.	France	7	Callois....	Richard-Brasier	France	13	Duray....	De Dietrich....	France
2	Earp....	Napier.....	England	8	Rolls....	Wolseley.....	England	14	Bianchi..	Wolseley.....	England
3	Jenatzy..	Mercedes.....	Germany	9	De Caters..	Mercedes.....	Germany	15	Werner..	Mercedes.....	Germany
4	Lancia...	Fiat.....	Italy	10	Cagno....	Fiat.....	Italy	16	Nazzari..	Fiat.....	Italy
5	Braun....	Mercedes.....	Austria	11	Hyeronimus	Mercedes.....	Austria	17	Burton...	Mercedes.....	Austria
6	Lyttle....	Pope-Toledo....	America	12	Dingley...	Pope-Toledo....	America	18	Tracy....	Locomobile....	America

stopped and a control card given to the mechanic. If an interval of less than three minutes separates him from the previous vehicle, the car will be held in the control until that period has elapsed.

A short distance past the village of Laqueuille is the railway station where a single track crosses the road. Here is the first of the special wooden bridges constructed over the grade crossings. The official tests took place a few days ago, when the bridges were crossed at 60 miles an hour. It was found that the junctures with the road were rather too abrupt, and they are now being made more gradual by means of a layer of cement.

For a distance of 8 miles after the bridge the road is comparatively good, and the 30-horsepower Pope-Toledo gave some good indications of speed.

Suddenly this good piece of road has to be left, for at an angle on which stands a large stone figure of the Virgin Mary the course almost doubles back on itself, forming a perfect V. As the road is here almost level, this particular spot offers no great difficulty. All the drivers approach it at top speed, brake rapidly, swing round, and pick up speed again without the loss of a second.

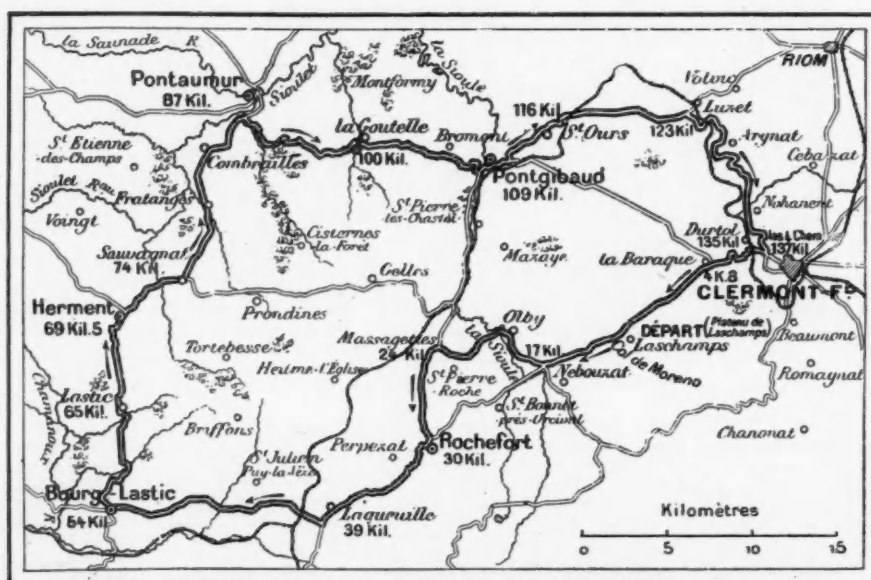
From this point (Bourg-Lastic) to Herment the road is narrow, being at many points not more than 22 feet wide. It is one of the by-roads of the district, and in order to put it into a fit condition for the race much repairing has been necessary. In

many places stones still lie loose on the surface, and as the sharp bends were tackled the rear wheels often skidded, throwing up a shower of dust and fine stones.

Between Herment and Pontaumur the altitude does not vary considerably, being

Almost all of the time he is half out of his seat to get a glimpse around the bend, and a "Right away" is uttered as soon as the next strip of road is seen to be clear.

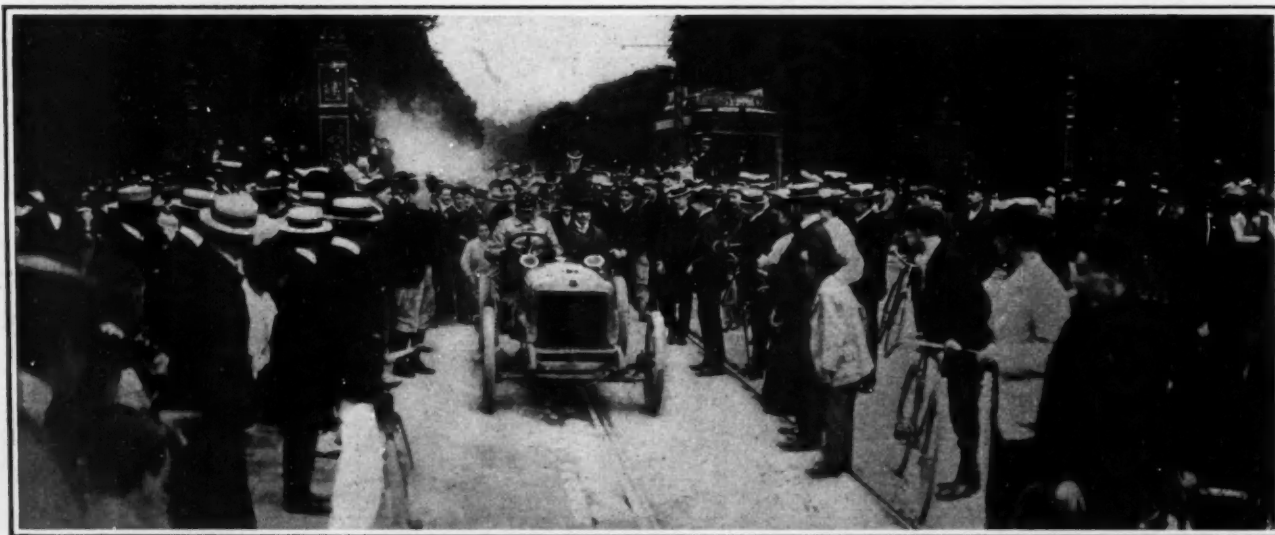
The precaution is necessary, for going sharply around a bend on a 5 per cent.



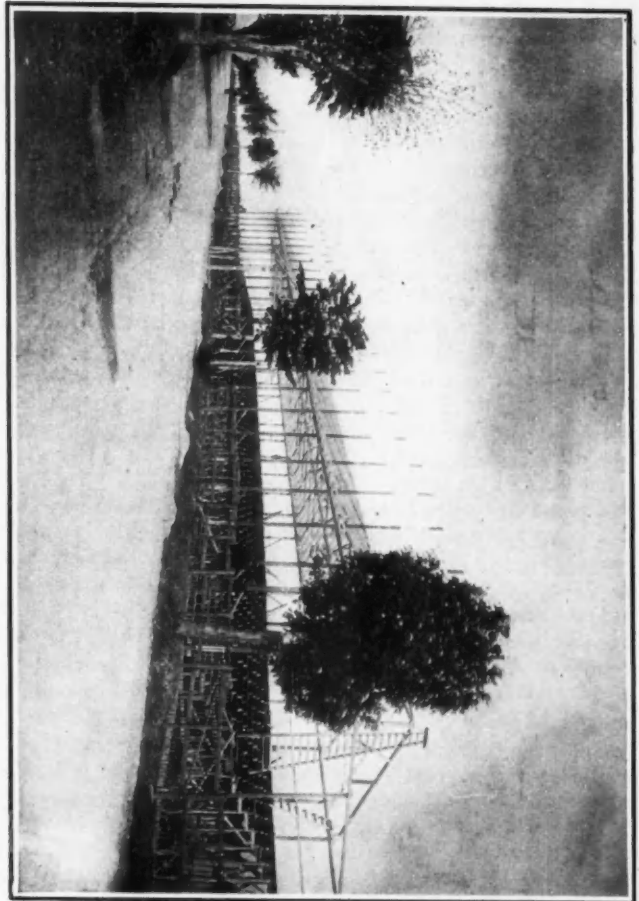
SKETCH MAP OF AUVERGNE CIRCUIT PREPARED BY LA VIE AUTOMOBILE.

from 2,310 feet to 1,650 feet. The sharp curves, however, are never absent, and Dingley, who is acting as mechanic, fulfills the Prefect's recommendation to "use the horn abusively" in a wholehearted manner.

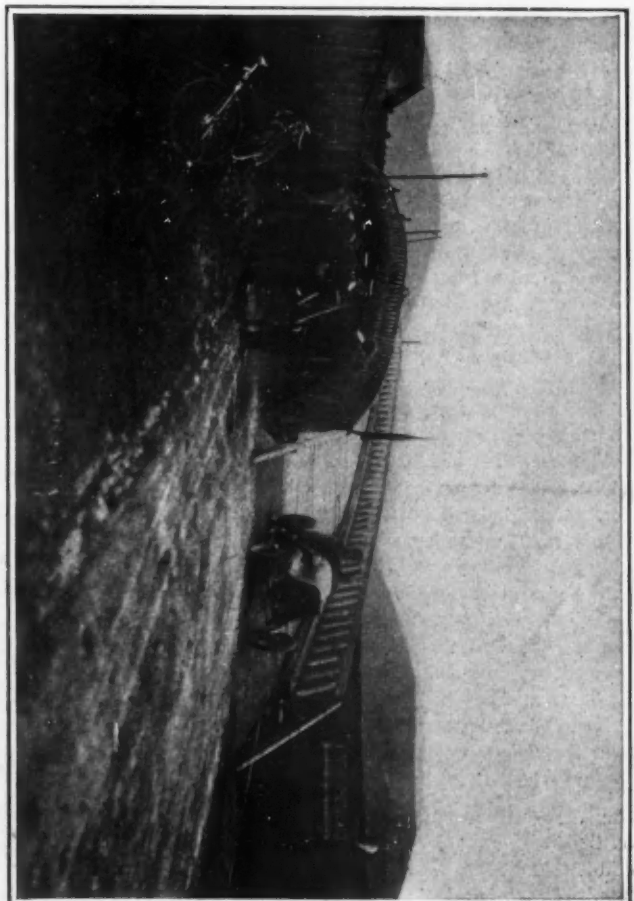
down grade, a flock of sheep is found to be blocking the road. The car is pulled up in about 18 feet, and all danger avoided. At another point the steam rollers and apparatus for tarring the road are suddenly



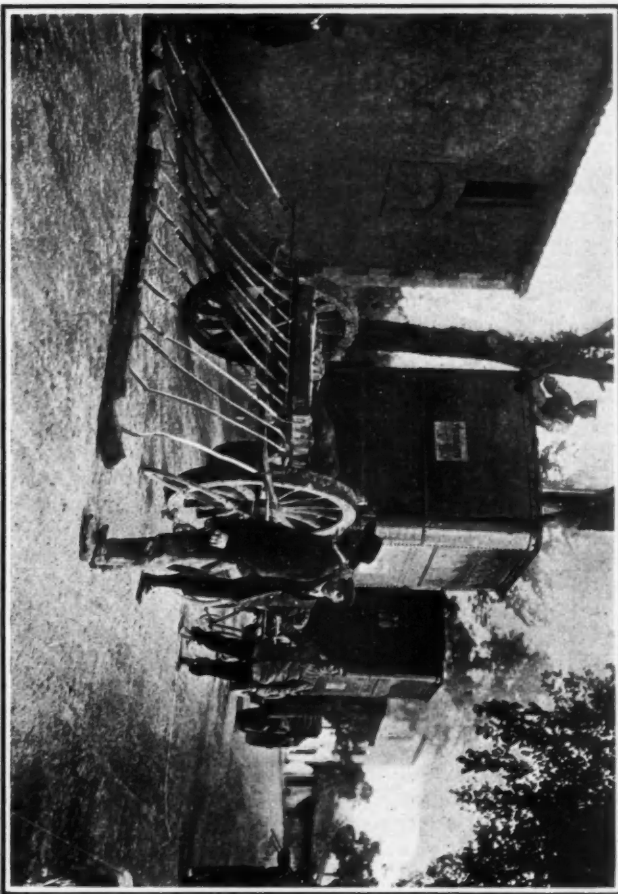
TRIUMPHAL ENTRY OF THERY THROUGH THE GATES OF PARIS ON HIS RETURN FROM WINNING THE G. B. ELIMINATION TRIALS.



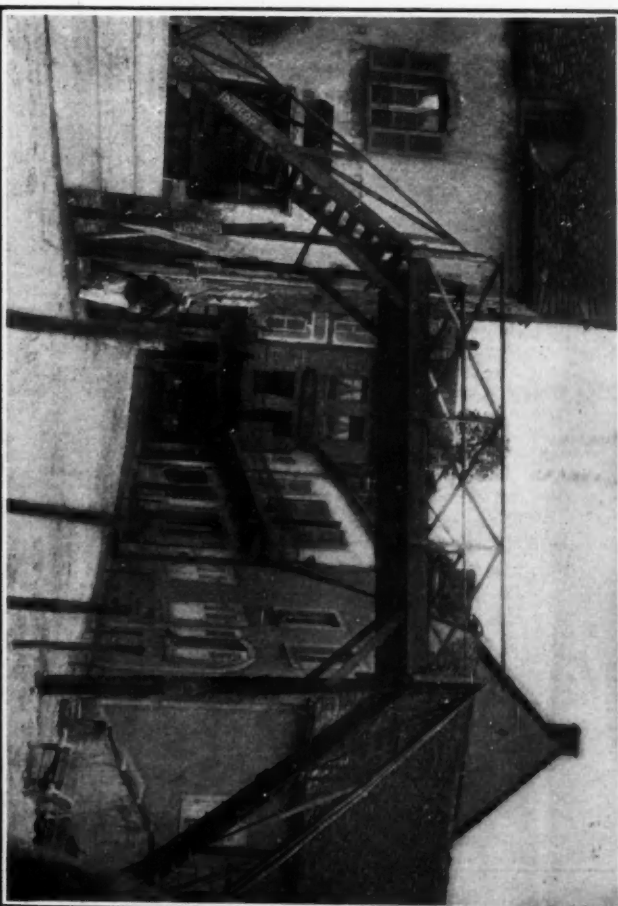
Erecting the Grandstand on the Plateau de la Laschamp.



Pope-Toledo Racer Crossing Temporary Bridge over Railroad near Laqueuille.



Sprinkling the Course with Tarry Fluid, which Brushes Distribute Evenly.



Temporary Foot Bridge over the Course in the Town of Rochefort.

VIEWS ALONG THE AUVERGNE CIRCUIT IN FRANCE, SHOWING INTERESTING FEATURES OF THE PREPARATIONS FOR THE INTERNATIONAL GORDON BENNETT RACE, TO BE HELD JULY 5.



come upon. Again the value of a powerful brake is manifested and skilful driving gets the car by with a half-inch margin on each side.

The natives of this isolated country have caught the spirit of automobilism. Everybody is enthusiastic. The women stand and smile by the roadside as the cars rush by; the road men doff their caps at the approach of a racing machine; the farm men pull quickly to one side on hearing the sound of a horn; only the wild sheep dogs, so common on the mountainside, remain untamed.

In spite of the vehement calls of its owner, a fierce brute will from time to time rush barking into the middle of the road. As was the case this morning, the result is generally a quick cry of danger, followed immediately by a loud howling and yelping which is a minute after lost in the distance.

The police and military authorities are lenient. In the few villages run through, a gendarme will timidly raise his hand to indicate moderation, but more frequently he greets a car with a military salute. Across the high street of Pontgibaud a huge banner warns chauffeurs that they will be summoned if they travel more than five miles an hour, but should the road be clear no protest is made against a car running at 35 miles an hour.

From Pontaumur to Pontgibaud, a distance of 13 miles, the road is wide, varying from 32 to 36 feet, and for the first three or four miles a high speed can be maintained. Then sharp turns on the steep grades become frequent. Just outside the village of la Goutelle, on a 12 per cent. down grade, two very sharp turns have to be tackled.

Lyttle is driving at top speed and is indeed going over this part of the road in the touring car as rapidly as he would be able to do it with the racer. In the tonneau it is necessary to wedge yourself tightly with your feet to prevent being thrown bodily out, and as each difficult angle is negotiated, Lyttle gives a glance around to see that his passengers are all there and utters briefly, "That's fierce!"

To get through Pontgibaud safely requires careful driving, for the road narrows down to less than 17 feet, makes four successive sharp turns, crosses a stream by a narrow bridge and then widens out to 29 feet on an up grade of 10 per cent, which, being perfectly straight, can be taken at high speed. For a few hundred yards the railway runs alongside the road, and by chance an opportunity was given the American car of proving its speed superiority over the local train. At Pontgibaud on the day of the race there will be a spacing control the same as at Laqueulle, previously described.

Near Vaurial the second temporary bridge over the railway is passed, and shortly after the most beautiful scenery on the circuit comes into view. The road forms a ledge on the hillside. On the left a perpendicular cliff; to the right is a sheer drop of several hundred feet into a picturesque ravine, the sides of which are covered with trees and

bushes, and at the bottom of which a white road twists between patches of cultivated ground flanked by red roofed cottages. At two or three points one can look across the ravine and see the course winding around a bend on the hillside a mile ahead. The road here is about 39 feet wide, well made, and, despite the precipices, a high speed is possible. A height of 2,950 feet is attained on this chain of hills, and the country is visible for miles around.

Twelve miles from Clermont the down grade commences and continues right into the town, descending from 900 meters to 400 meters. The utmost caution is necessary, for the road is but a series of sharp turns on a down grade of from 7 to 15 per cent., and only averages 26 feet in width. It is utterly impossible on the greater part of this road for one car to pass another going in the same direction. To attempt it would be to court disaster.

At 9:30 o'clock the Pope-Toledo car was back in the garage at Clermont, which, making deductions for the stops to visit the various repair stations marked out on the road, gave 2 hours 28 minutes for the 86 miles covered.

The reader will observe that the course was gone over in the direction that the cars will race, which is, with the driver next to the inside of the circuit. This can be seen very clearly on the map of the course, printed on page 4. The Vanderbilt race on Long Island was run in the same direction, which is opposite to that invariably followed in American track races.—Editor's note.

## French Racing Motorcycles.

*Special Correspondence.*

PARIS, June 17.—France is to be represented in the international motorcycle race,

to be run June 25, by one Griffon and two Peugeot machines, the elimination trials over the St. Arnoult-Dourdan-Ablis course on June 11 having resulted in the selection of Demeester on a Griffon, and Guippone and Champoiseau on Puegeots, as the French team. In the trials all three averaged more than 44 miles an hour for the 245 kilometers (152 miles).

The two makes of machines have much in common. Both have two-cylinder engines of between 7 and 8 horsepower set vertically in a loop of the frame in front of and below the crankbracket, as shown in the accompanying engraving of one of the Peugeot machines. The cylinders are set at an acute angle to each other, or in the form of a V, with the carbureter between their heads. The engines are balanced with the utmost care, vibration being almost imperceptible when running. The bore and stroke of the Peugeot cylinders are 80 mm. by 86 mm., respectively; of the Griffon, 85 mm. by 85 mm.

The racing machines are fitted with automatic inlet valves, which is all the more notable because the commercial machines built by the makers of both machines all have mechanically actuated valves. Drive is by a V-shaped belt, following the standard system on all motorcycles in France. Both the Griffon and Peugeot racing machines come well within the weight limit of 110 pounds. They are fitted with 2 1-4 inch tires.

A peculiarity of the Peugeot is the double-barrel carbureter with only one float chamber, the object being to avoid the carburetion troubles common to engines of this type when carbureters with single mixing chambers are used. The Griffon carbureter however, has only one mixing chamber.

Ignition by jump spark from separate coils is used on both makes, the Griffon system possessing the peculiarity that the



CHAMPOISEAU ON PEUGEOT MOTORCYCLE, A FRENCH DEFENDER IN THE INTERNATIONAL RACE.

## Carbureter Functions Discussed.\*

By MERVYN O'GORMAN.

(Concluded from page 777, issue of June 29.)

timer, instead of being in the usual place on the engine, is bolted to the middle bar of the bicycle frame under the tank and is driven from mitre gears on the camshaft through a cardan jointed shaft. Storage batteries, or accumulators, for ignition, are carried on the heads of both machines, suspended from the handlebars. Pedals are fitted to all machines, their use being made obligatory by the rules of the race.

Both machines have a speed capability of about 90 miles an hour when fitted with their "record run" driving pulleys, but for the elimination trials they were "geared" for a maximum of 75 miles an hour.

France, Germany, Austria and England will be represented by three men each in the international race to be run next Sunday.

### AMERICAN EXPORTS GROWING.

Exports of automobiles and parts of same from the United States for the month of May, 1905, aggregated in value \$291,681, an increase of \$120,409 over the same month last year.

During the eleven months ended with May, 1905, the exports reached a total value of \$2,167,744; an increase of \$453,937 over the same period ended with May a year ago, and more than double the aggregate for the eleven months ended with May, 1903.

### A. A. A. ROUTE MAPS.

Arrangements have been made by the American Automobile Association with the Survey Map Company of New York City whereby members of the A. A. A. can secure the complete set of Automobile maps which the company is publishing, eighteen sections, embracing eight to ten maps each, for a total cost of \$18, as against \$30 charged to non-members.

These maps cover a territory embracing the states of New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine and the lake shore route from the New York state line to Chicago. The complete set embraces 170 individual maps. They were prepared carefully from actual road work by the members of the A. A. A., under the supervision of the chairman of the touring committee. The good roads are indicated in red, and ordinary roads in black. The maps are on a scale of four miles to the inch. Mountains are indicated and their elevations given. On the back of each map is published a description of a through route between important cities. The sections are to be issued at the rate of one about every two weeks, and non-members can secure them separately from the publishers at a cost of \$1.75 each, or may subscribe for the full set.

An Atchison girl was out riding in an automobile this morning, when the rain came up. And you should have seen her smash the speed ordinance in getting home.—Atchison, Kans., *Globe*.

**Heating.**—It is Mr. Dugald Clerk who has shown that the colder the mixture we draw in the better for the possible output of the engine, provided that as we evaporate the gasoline we supply the latent heat for the purpose. The amount of heat required is, therefore, proportional to the amount of gasoline used. As the mixture is not always of constant proportion, it would be best to heat the gasoline itself as it leaves the nozzle by making it impinge on a hot cone kept at a constant heat by a thermostat. This method does not exist at present, but approximations to it exist by warming the mixture chamber into which the gasoline passes, and thus supplying the extra heat, for which larger quantities of mixture are used, by heating a portion of the air.

The objection to this plan of passing a proportion of the air over a hot pipe is that when the gas is taken in slowly, say at half throttle, it gets more heated than when the same volume is taken in fast, so that if the car is right for hill-climbing, it is probably wrong for racing at full power on a more moderate gradient. This results, for one example, in the necessity for elaborately tuning a racing car to make the best average on a varying road, instead of tuning the carburetter in a skillful manner to give, not the best average, but the actual best possible result at each and every section, hilly or flat.

I am afraid you will feel disposed to protest against my introducing three thermostats in a car to be supplied with air, which, in ordinary course, will be at various temperatures. My reply is that I am not so sure we shall not yet even introduce a fourth thermostat into the air supply, but I am fairly hopeful some such course will yet be adopted when we consider that little weight is added by these devices, and that one minute gained in a six-hour race is quite a respectable victory, bringing a business worth tens of thousands of pounds.

**Spray Nozzle.**—The function of this is to minutely subdivide the issuing liquid, so that a very large surface is offered to the air for rapid evaporation. Each cylinder full of gas requires a little cube of gasoline, having about 1-8-inch to the side, and this may be shot out of a single or many orifices, and as the evaporation takes place from the moment the liquid leaves the nozzle, it is disposed to abstract all the heat it can get, not only from the air, but also from the metal nozzle itself, thus lowering its temperature considerably. For this reason, if it be at all possible to do so, the water heating should be brought as near as possible to the nozzle.

Mr. Perissa points out that if nozzles are

designed to produce a high jet (which means that they do not impede the flow of liquid, and are, therefore, efficient as regards the output for a given pressure) they have the defect that the jet so produced remains compact, and will not be easily broken up into a cloud of "droplets." Capillary tubes, on the other hand, though giving a good "cloud effect," introduce a high resistance, which makes a difficulty in starting the carburetter, a matter of no small importance, now that we are getting to use cars which almost invariably start on the switch.

The Longuemare type of nozzle avoids the difficulty of drilling a fine hole accurately to 1 in 10,000ths of an inch (which cannot be altered or amended) by substituting for this the making of scratchings inside the conical cup which is fitted with a male piece, giving the effect of a rose, and allowing a little adjustment of the size and number of holes used.

The control of the liquid after it leaves the nozzle has been most elaborately dealt with, and various methods are indicated in the examples of carburetters which I have given. I do not think I shall be understating the case if I claim that the difficulties in properly dealing with the fluids after this point are at least as great as the sum of all the difficulties met with up to here.

I should like to put forward the somewhat paradoxical suggestion that much as we may pride ourselves in England on having stood together to fight the alleged master patent of Maybach's float feed carburetter, it might have been better for us if we had never won. For supposing one half the ingenuity that has since been expended on float feed spray devices had been turned into other channels, the riddle might have been solved elsewhere in a simpler fashion. Witness the excellent beginnings made by surface wick carburetters of the most amazing simplicity of design.

As I have said, the physical difficulty in the way of persuading a liquid and a gas to follow even remotely similar laws over a very wide range of variation of two variables, namely, the pressure and the duration of that presence is immense. If both the substances concerned were presented in the gaseous form they would appear *a priori* to be easier to deal with as obeying by their nature identical laws as to the relations between volume, pressure and temperature, and similar laws as regards their flow through pipes and inertia.

**Don't** wear a pair of racing goggles when you ride in a piano-box electric runabout; the two do not go together, somehow.

**Don't** let in the clutch with one foot while holding down the brake with the other. It is no longer a new stunt!

\*From a paper read before the Automobile and Cycle Engineers Institute, Birmingham, England.



## Text of New Connecticut Law.

THE result of the labors of the Connecticut Legislature over the ten automobile bills introduced last winter and spring is embodied in the single bill printed below, which was passed by the Senate at Hartford last week and sent to the Governor for signature.

Something unusual in the way of a law was to have been expected from the smoke that ascended from the committee discussions and hearings on the various measures, but the compromise substitute for them all follows the conventional lines very closely and embodies nothing really radical.

The new law, upon signature by the Governor, becomes effective on July 15, and supercedes and repeals the registration and speed laws of 1903. One of the most important effects of this is that the speed limit throughout the state, outside of the limits of any city or borough, is raised from fifteen miles an hour to one mile in three minutes, or twenty miles an hour, while within city and borough limits the rate still remains twelve miles an hour. The old speed law gave to the Mayor of any city, the Selectman of any town, or the Warden of any borough, authority to grant permits for special speed trials and races, but nothing in the new law provides for this. The power of regulating automobiles is taken away wholly from cities and boroughs except on park drives and the regulation of parades, assemblies, etc.

Under the new law two license number tags must be carried on every automobile, one in front and the other in the rear, but only one such number is required on motorcycles, upon which the number may be painted in letters one inch high, accompanied by the initial of the State. The license plates are to be furnished by the Secretary of State at cost; registration fee is \$1 for each vehicle. Non-residents who have complied with registration laws in other states and territories may use the highways of Connecticut for not more than fifteen days without securing licenses in that state.

Penalties for violation of the speed limits and the special requirements regarding stopping when signalled by the driver of a horse may be made very heavy. For a first offense a fine not exceeding \$200, or imprisonment for not more than thirty days, or both, may be imposed by any justice of the peace, though the defendant is given the right of appeal from the judgment. For second and subsequent offenses the penalty may be \$500 fine or imprisonment not exceeding sixty days, or both, but jurisdiction in such cases is taken from the justices of the peace. For other offenses the penalty may be a fine of not more than \$50.

Appended to the law are a number of sections designated "Rules of the Road." These embody the usual regulations as to

turning out to the right when meeting other vehicles, passing on the left overtaken vehicles, and keeping to the right of the intersection of the middle of crossing roads when turning to the right and to the right of the intersection when turning to the left. New provisions, however, make owners of all vehicles responsible for the acts of their agents, servants, employees, or persons to whom the vehicles have been loaned or hired, when, through inexperience or incompetence or negligence of the law, injury to person or damage to property of another is done. Another section makes persons who fail to observe the rules of the road responsible in treble the amount of injuries or damages caused, and for the costs of suit.

Following is the text of the new law in full:

Section 1.—Whenever the term "motor vehicle" is used in this act, except when otherwise expressly provided, it shall include all vehicles propelled by any power other than muscular, except road rollers; fire engines, police patrol wagons, ambulances, and such vehicles as run only upon rails or tracks.

Sec. 2. Every owner of one or more motor vehicles shall file in the office of the secretary of the state, a statement of his name, residence, and post office address, on a blank furnished by the said secretary for that purpose, and shall obtain from the said secretary a numbered certificate, which certificate shall state the name of such owner and that he has registered in accordance with the provisions of this act.

Sec. 3. Every such motor vehicle, except motor bicycles, shall, at all times while being used or operated upon the public highways of this state, have displayed in a conspicuous place and manner, securely fastened so as not to swing, upon both the front and rear of such vehicle a plate or marker, which shall be obtained from the said secretary as hereinafter provided, and which shall bear the initial letter of this state and the number of the certificate issued to the owner of such motor vehicle. The letter and figures thereon to be four inches high and each stroke thereof to be one-half inch wide and at all times unobscured.

Sec. 4. Every motor bicycle shall, at all times while being used or operated, upon the public highways of this state, have displayed thereon the initial letter of this state and the number of the certificate issued to the owner of such motor bicycle, such letter and figures to be at least one inch high and either painted on such motor bicycle or displayed on a plate or marker securely fastened thereto.

Sec. 5. The said secretary of the state shall keep a record of all statements filed with him, and of all certificates issued by him, which record shall be open to public inspection; he shall furnish, from time to time, at cost price, to any person registered under the provisions of this act, as many plates or markers as may be required by such person for display upon the one or more motor vehicles, except motor bicycles, owned by him at the time of such registration, or thereafter acquired, the number on such plates or markers to be the same in every case as the number of the certificate originally issued to such person under the provisions of this act; and in the event that any certificate issued by the said secretary under the provisions of this act shall be lost

or destroyed, he shall issue to the person whose certificate has been thus lost or destroyed a duplicate thereof, bearing the same number as the certificate originally issued to such person.

Sec. 6. A fee of \$1 shall be paid to the said secretary of the state for each original or duplicate certificate issued by him in accordance with the provisions of this act.

Sec. 7. No license, permit, or registration shall be required of the owner or operator of any motor vehicle except in accordance with the provisions of this act, nor shall any such vehicle be required to be marked in any way except in accordance with the provisions of this act; but nothing in this section contained shall apply to such motor vehicles as are offered to the general public for hire.

Sec. 8. Any non-resident of this state who shall have complied with the laws of any other state or territory of the United States requiring the registration of owners of motor vehicles, or of motor bicycles, or of both, and the display of identification numbers on such motor vehicles, and who shall cause the identification numbers of such state or territory, in accordance with the laws thereof, together with the initial letter or letters of the state or territory issuing the same, to be displayed on his motor vehicles while used or operated upon the public highways of this state, may use such highways, for a period not to exceed fifteen days in any one year, without complying with the provisions of the foregoing sections of this act; provided; however, that if any non-resident shall be convicted of violating any provisions of section ten or section eleven of this act, he shall thereafter be subject to and required to comply with all the provisions of sections two, three, four, five, six, and seven of this act.

Sec. 9. No prosecution based upon sections two, three and four of this act shall be brought for any offense committed prior to August 1, 1905.

Sec. 10. No person shall operate a motor vehicle on the public highways of this state at a rate of speed greater than is reasonable and proper, having regard to the width, traffic, and use of the highway, or so as to endanger property or the life or limb of any person, or, in any event, within the limits of any city or borough at a greater rate of speed than one mile in five minutes, or outside the limits of any city or borough at a greater rate of speed than one mile in three minutes.

Sec. 11. Upon approaching any person walking in the traveled portion of any public highway, or a horse or any other draft animal being led, ridden, or driven therein, or a crossing of intersecting public highways, or a bridge, or a sharp turn or curve, or a steep descent, and also in passing such person, horse, or other draft animal, and in traversing such crossing, bridge, turn, curve, or descent, the person operating a motor vehicle shall have the same under control and shall reduce its speed. If such horse or other draft animal being so led, ridden, or driven shall appear to be frightened, or if the person in charge thereof shall signal so to do, the person operating such motor vehicle shall bring the same and the motor or other power propelling the same immediately to a stop, and, if traveling in the opposite direction, shall remain stationary so long as may be reasonable to allow such horse or animal to pass, or, if traveling in the same direction, shall use reasonable caution in thereafter passing such horse or other animal.

Sec. 12. No city, town, or borough shall have any power to make any ordinance, by-laws, or resolution respecting the speed of motor vehicles, and no ordinance, by-law, or resolution heretofore or hereafter made by



any city, town, or borough in respect to motor vehicles shall have any force or effect; provided, however, that powers given to any town, city or borough to regulate shows, processions, assemblages, or parades in streets and public places, and to regulate the use of public parks, and all ordinances, by-laws, and regulations which may have been or which may be enacted in pursuance of said powers, shall remain in full force and effect.

Sec. 13. In all complaints for the violation of any provision of this act the justice of the peace before whom the same shall be tried shall have jurisdiction and power to render judgment therein, and issue process of execution and mittimus thereon, where such fine or penalty imposed shall not exceed two hundred dollars, or imprisonment for thirty days, or both; but the defendant shall have the right of appeal as in other cases.

Sec. 14. Any person violating any provision of sections ten and eleven of this act shall be fined not more than \$200 or imprisoned not more than thirty days, or both, for a first offense, and shall be fined not more than \$500 or imprisoned not more than sixty days, or both, for any subsequent offense. Any person violating any other provision of this act shall be fined not more than fifty dollars.

Sec. 15. This act shall take effect July 15, 1905.

Sec. 16. Chapters 107 and 108 of the public acts of 1903 and all other acts and parts of acts inconsistent herewith are hereby repealed.

#### RULES OF THE ROAD.

Section 1.—Whenever the term "vehicle" is used in this act it shall include bicycles, tricycles, motor bicycles, motor vehicles of all kinds, vehicles drawn by horses or other animals, and all other vehicles used for the carriage of persons or goods, no matter how propelled, excepting only such vehicles as are run only upon rails or tracks.

Sec. 2.—Whenever a person walking in the traveled portion of a public highway, or a person riding, driving, or leading a horse or other animal therein, or driving or operating a vehicle therein, shall meet another person thus walking or thus riding, driving, or leading a horse or other animal, or thus driving or operating a vehicle, if such persons are moving in opposite directions each shall slacken his pace, if necessary, and seasonably turn to the right so as to give half of the traveled road, if practicable, and a fair and equal opportunity to pass, to the other; or, if they are moving in the same direction, the person overtaking shall pass on the left side of the person overtaken, and the person overtaken shall, as soon as practicable, turn to the right so as to give half of the traveled road and a free passage on the left, to the other. Any such person shall, at the intersection of public highways, keep to the right of the intersection of the centers of such highways when turning to the right, and pass to the right

of such intersection when turning to the left.

Sec. 3.—Every such person who shall, by neglecting to conform to the provisions of section two of this act, cause any injury to the person or property of another, or shall negligently collide with another, thereby causing such injury, shall pay to the party injured treble damages and costs.

Sec. 4.—If the owner of any horse or other animal, or of any vehicle, shall entrust such animal or vehicle to his agent, servant, or employee, to be ridden, led, driven, or operated by such agent, servant, or employee upon the public highways of this state, or shall rent or loan the same to an incompetent and inexperienced person to be thus ridden, led, driven, or operated, and such agent, servant, or employee, while in the execution of such owner's business within the scope of his authority, or such incompetent and inexperienced person, as a result of such incompetency and inexperience, shall, by neglecting to conform to the provisions of section two of this act, cause any injury to the person or property of another, or shall negligently collide with another, thereby causing such injury, such owner shall pay to the party injured his actual damages and costs; but in every case the party injured shall elect whether he shall proceed against such owner under the provisions of this section or against the person actually causing such injury under the provisions of section three of this act.

Sec. 5.—Any person violating any of the provisions of section two of this act shall be fined not more than fifty dollars.

Sec. 6.—Sections 2035, 2036, 2037 and 2038 of the general statutes and all other acts and parts of acts inconsistent herewith are hereby repealed.

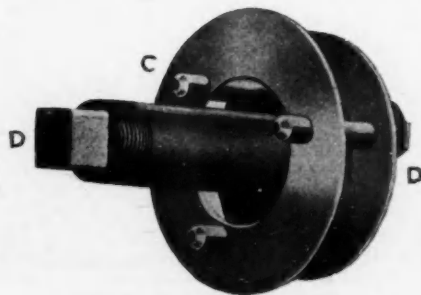
### Stevens-Duryea Disc Clutch and Carbureter.

Trade literature is, as a rule, a very different thing from what it once was. Manufacturers and dealers are beginning to understand that the man who is really interested in a car does not pay the slightest attention to bald statements proclaiming a particular car to be "the best;" or to "odious comparisons" with the products of other makers. He wants facts—not opinions, real or imaginary. In issuing a booklet describing the new Stevens-Duryea four-cylinder twenty-horsepower touring car, the J. Stevens Arms & Tool Co., of Chicopee Falls, Mass., makes the statement that the book is a recognition of the right of the purchaser to know what he is getting

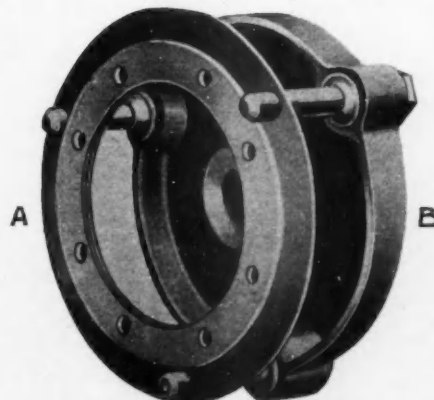
for his money. While the description does not include those parts of the car which are similar, in their main features, to like parts of other cars, the distinctive features, and the constructive details which the manufacturers consider are improvements on common practice are carefully described and clearly illustrated. Among these is the multiple-disc clutch. The design of the power and transmission plant, in which the crank-case of the motor and the transmission gear-case are joined by a tubular intermediate member, necessitated a clutch of such small diameter that it would occupy no more space than was afforded by this intermediate casing, the fly-wheel being quickly disposed of by placing it at the front end of the motor. So the multiple-disc type of clutch was decided upon, and a special form worked out.

A flange secured to the rear end of the engine crankshaft carries three studs at equal distances apart on its periphery, the studs projecting rearwardly, parallel to the shaft. On these studs are strung four discs—or, more properly speaking, flat, thin steel rings—the rings being of such diameter that the holes through which the studs pass are close to the outer edges, leaving the major portion of the ring, toward the center, free and clear. This part of the ring, inside the stud holes, is covered with leather on both sides. It will be understood that the whole of this part of the clutch must revolve with the crankshaft of the motor and constitutes the driving member of the clutch. The driven member is made in a very similar way; the forward end of the primary shaft of the transmission carries a flange that fits into a recess in the face of the large flange on the crankshaft. The small flange also carries three studs, pointing in the same direction as the studs on the large flange, but so close to the shaft that they are clear of the inner edges of the rings on the driving member of the clutch. Rings are mounted on these studs in the same way as the rings on the other studs; except that in the driven member the rings are strung by holes near their inner edges.

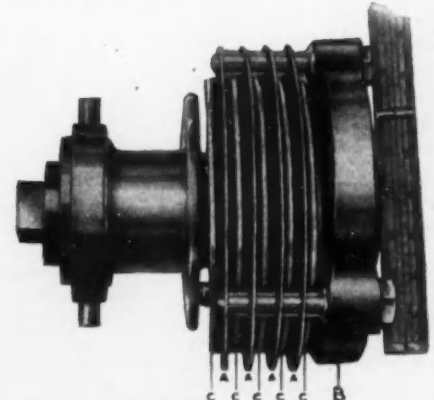
In assembling the friction rings are strung on the studs of the driving and driven members alternately, until there are



Driven Member and Plain Steel Disc.

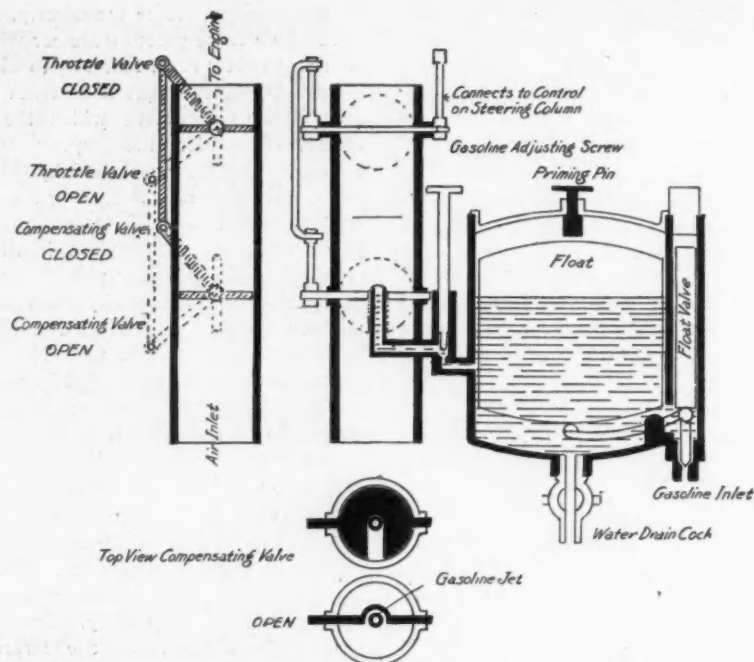


Driving Member and Leather Faced Disc.



Complete Clutch with Discs in Position.

STEVENS-DURYEA MULTIPLE DISC CLUTCH, SHOWING DRIVEN AND DRIVING MEMBERS AND COMPLETE CLUTCH ASSEMBLED.



STEVENS-DURYEA CARBURETER, SHOWING DIAPHRAGM AT SPRAYING NOZZLE.

four large rings with leather facings on the studs of the driving member, and five of the smaller plain steel rings on the driven member; the outer edges of the driven rings overlapping the inner edges of the driving rings. As all these rings have considerable lateral play, the shafts on which they are mounted may be rotated independently of each other. If, however, pressure is brought to bear on the end disc, all the discs will be pressed together, each disc being nipped between two others, binding the two sets together and forcing them to revolve together when either shaft is turned. This pressure is supplied by a stiff helical spring normally tending to keep the discs pressed together and the clutch in engagement, and a pedal is provided for compressing the spring and releasing the clutch in exactly the same manner as with the usual cone clutch.

As the primary transmission shaft must pass through the large openings in the centers of all the discs, the part that centers the clutch is a short separate section attached to the main part of the shaft by a squared joint. No oil is used in this clutch, as the leather and polished steel work together well without lubrication; and the action is very smooth and uniform, permitting the car to be started from rest easily, smoothly and without the jar. The fact that all wear is automatically taken up by the pressure of the spring, thus obviating the necessity for frequent and delicate adjustments, is a feature of great merit.

The Stevens-Duryea carbureter is remarkably simple and free from liability to derangement. It is diagrammatically illustrated herewith, and its action will be understood readily. The diaphragm at the spray nozzle is linked by an outside connection to the throttle diaphragm and they move together when the throttle lever on

the steering wheel is moved. The throttle regulates the supply of gas that is allowed to pass to the motor, and the diaphragm at the spray nozzle concentrates the flow of air close to the nozzle when the throttle is closed and the suction is weak, and reduces the suction proportionately as the velocity of the air increases when the throttle is opened.

### New Publications.

Automobilists, actual or prospective, and others who are in need of elementary knowledge concerning the construction and operation of gasoline automobiles usually have to delve for what they want and bring it to light among a mass of data, technical, theoretical or descriptive. It is a rather tedious process, and the average man cannot be blamed for wishing there was some other way out of the difficulty. To meet this need and provide a way of escape for the seeker after knowledge, *Motors and Motoring*, by Henry J. Spooner, C. E., has been brought out by Dodd, Mead & Co., New York. It is a convenient little book, and starts in at the beginning by stating fundamental facts. Throughout the book principles are dealt with, and no particular practical applications are described. All the drawings are diagrammatic, made so as to indicate in the clearest possible way the functions common to all gasoline automobiles, without confusing the inexperienced mind by describing a host of different forms of the same thing, all perhaps working on practically the same principles, but differing sufficiently to get the amateur hopelessly muddled. The reader will not run into a forest of mathematical formula of no earthly use to him; he will not lose himself among a lot of theories, admirable in them-

selves but meaningless to the beginner; and he will not find himself wading through descriptions of cars that may be out of date before he has finished the book, and in any case, can just as well be obtained from the catalogues of the manufacturers. The book is an excellent one for the beginner in the study of the gasoline automobile, and should be especially useful for the youth with mechanical inclinations who wants to know the why and wherefore of the most modern means of transportation.

### CAR TOOL LOCKER.

A convenient feature of the Thomas car is the tool locker illustrated herewith. One of these handy little receptacles is located at each side of the pressed steel dashboard, having racks in which pliers, screw drivers, wrenches and other tools may be carried conveniently, out of the way and yet within easy reach when wanted. Locks are provided, so that the contents are not at the mercy of the first "borrower" who comes along. These lockers are found in the dashboard of all the Thomas Flyers, manufactured by the E. R. Thomas Motor Co., of Buffalo, N. Y.

As the public becomes accustomed to the presence of the automobiles in the public highways the outcry against the machines is dying out to a great extent. The history of the bicycle is going to be repeated in the case of the automobile. Twice as many autos are in use this year as last, but the complaints are not anywhere near as numerous and the feeling against the machines is not nearly as bitter as it was. The fool "record breakers" will have to be suppressed just as the bicycle "scorchers" were, and then we will hear no objections to the use of the machines on all the public highways.—Kenosha, Wis., *Courier*.



TOOL LOCKER IN THOMAS DASHBOARD.

## Automobiles Used by New York City.\*

Total of Twenty-one Passenger Vehicles Now in Active Service  
—Thirty-four to be Purchased—Descriptive Details.

By WILLIAM L. DUDLEY.

### Automobiles and Motor Bicycles in Use by the Government of the City of New York or Scheduled to Be Purchased.

Department	In Use			Prospective			Grand Total
	Gasoline	Steam	Total	Gasoline	Steam	Total	
Mayor and Borough Presidents.....	*4	..	4	..	..	..	4
Department of Street Cleaning.....	6	..	6	1	..	1	7
Fire Department.....	2	..	2	9	..	9	11
Department of Health.....	..	..	..	†21	..	21	21
Department of Parks.....	2	..	2	..	..	..	2
Department of Docks.....	..	2	2	..	..	..	2
Department of Public Works.....	1	1	2	††1	..	1	3
Police Department (Automobiles).....	..	..	..	2	..	2	2
Police Department (Motor Bicycles).....	3	..	3	..	..	..	3
Totals .....	18	3	21	34	..	34	55

\*Including two privately owned. †Includes one automobile ambulance authorized and constructed. ††Owned by Chief Engineer Tillson, of Brooklyn.

### DEPARTMENT OF HEALTH.

At present no motor vehicles are in use in this department, though an automobile ambulance has been constructed by the Daimler Manufacturing Co., of Long Island City, according to the specifications of the department, and is only awaiting an official test before being accepted. Upon its acceptance it will be put into service in connection with the Hospital for Contagious Diseases on Kingston avenue, Brooklyn. The ultimate plan of the department is to obtain four of these motor ambulances in

\*Concluded from page 744, issue of June 22.

each of the five boroughs of the city—a total of twenty in all. One would be used in each borough exclusively for the conveyance of patients suffering from one of the four contagious diseases, viz., smallpox, measles, scarlet fever and diphtheria. For each of these a separate horse ambulance is now used in each borough with the exception of the Borough of Richmond, where a single ambulance is used for all four diseases and is disinfected after each trip.

Dr. Thomas Darlington, President of the Board of Health, is also endeavoring to obtain a touring car for general inspection



MAYOR G. B. McCLELLAN IN WINTER COSTUME.

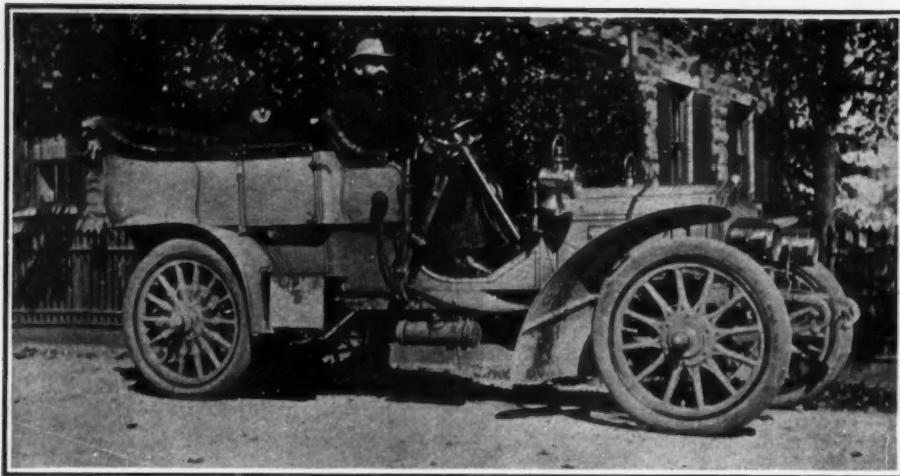
Courtesy of C. P. Darlington.  
All Rights Reserved.

purposes, such as visiting the Croton Watershed and the hospitals in the various boroughs. Regarding the need for an automobile for this purpose, Dr. Darlington said: "Such a vehicle is an absolute necessity, as I am now unable to go to Richmond or Jamaica, as I cannot possibly spare the time necessary to make the trip by ordinary mode of conveyance, yet these and many similar



FIRST OF THE TWENTY MOTOR AMBULANCES WHICH COMMISSIONER THOMAS DARLINGTON OF THE BOARD OF HEALTH PROPOSES TO PUT INTO SERVICE IN NEW YORK CITY—AN AMERICAN DAIMLER.





HEALTH COMMISSIONER DARLINGTON IN TONNEAU STARTING TO INSPECT CROTON WATERSHED.

trips of inspection are most urgent, either by myself or the sanitary inspector.

"Regarding the motor ambulances, their need is a matter of life or death, on account of the time which could be saved in taking a patient to a hospital in an emergency, such as a child dying from diphtheria and whose life could only be saved by putting a tube in its throat. The child might die while being taken to the hospital in a horse ambulance, while if taken in a motor ambulance its life might be saved."

#### DEPARTMENT OF PARKS.

No automobiles are used by this department in the boroughs of Manhattan, the Bronx or Richmond, but in the boroughs of Brooklyn and Queens, which are under the same general supervision and which contain fifty-five parks, large and small, and twenty-two and a half miles of parkways, two 16-horsepower Rambler touring cars are used by Commissioner Kennedy and Supt. Zartman, respectively. These two vehicles were purchased last year at a cost of \$1,550 each, and have been given very severe service on account of the extent of the territory covered, the tours of inspection extending from Bay Ridge, Bath Beach and Coney Island on the west to Astoria, College Point, Whitestone, Jamaica and Rockaway on the north and east. They have given good service within their limitations of power, but the officials of the department state that more powerful cars would be desirable, thus bearing out the experience of the Street Cleaning Department.

These cars are fitted with clincher tires, and punctures have been numerous, particularly upon the roads in the outlying districts, half a dozen tires having been used up between the two machines within a year. The chauffeurs are obtained through the Civil Service Commission and are paid \$3 a day. Both machines are kept at the stables of the Litchfield Mansion in Prospect Park, Brooklyn.

#### DEPARTMENTS OF DOCKS AND FERRIES.

This department used two Locomobile

steamers, one of 10-horsepower and the other 3-horsepower. The higher powered machine is the newer, having been bought last November, and is used by Superintendent Manley. It is used for general inspection purposes throughout the whole of Greater New York and has been run about 4,000 miles since its date of purchase. It is fitted with Diamond tires, and the only change which has been made in the original equipment has been the replacement of an inner tube which was cracked, the tires never having been punctured. About five miles to about a gallon of gasoline was said to be the average mileage. The other vehicle has been in use four years and still gives good service, being used by the assistant superintendent of the department. It has had good care and has never had a boiler tube burned out. Both vehicles are housed on Pier A, North river, New York, which is occupied jointly by the Department of Docks and Ferries and the harbor police.

The chauffeurs pass a civil service examination and are paid \$3.50 a day.

#### DEPARTMENT OF PUBLIC WORKS.

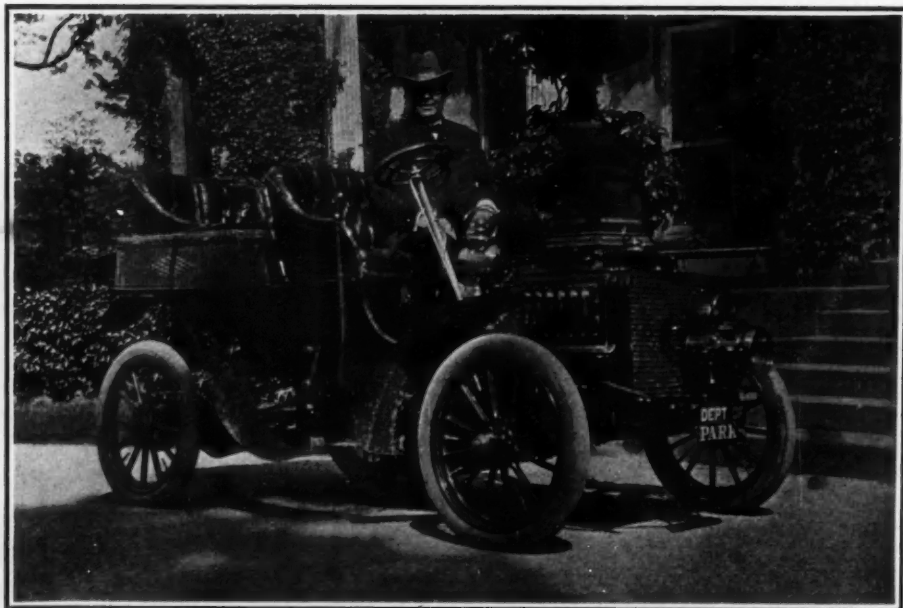
Two steam Locomobiles were bought for use in this department in January, 1903, one being used by M. S. Hill, chief engineer of the water bureau, and the other by Mr. Lacombe, engineer in charge of lighting. One was destroyed by accident last March and the other is still in service. It has been decided to replace the destroyed vehicle by a gasoline touring car of 10 to 20 horsepower, for which bids have been invited. This will be used by the Bureau of Lamps and Gas to inspect the public lighting service.

In Brooklyn, Chief Engineer George W. Tillson has a 10-horsepower Autocar run-about, which has been used about a year with very satisfactory results. It is going "about one-half the time," and covers from thirty-five to fifty miles daily. The front wheels are fitted with Goodrich tires and the rear wheels with Samsons, which are reported to give satisfactory service. The chauffeur is paid \$3 a day, which is the prevailing rate in Brooklyn.

#### POLICE DEPARTMENT.

Commissioner William McAdoo stated in response to an inquiry regarding the use of automobiles in this department that the purchase of an automobile for the use of the commissioner's office is contemplated, and that if the experiment is satisfactory it is likely that he will recommend the purchase of one for Deputy Commissioner Thomas F. Farrell in Brooklyn. Three motor bicycles are in use and are said by Commissioner McAdoo to give satisfactory service, especially in chasing automobilists who break the speed laws.

The harbor police also use a motor boat fitted with a 10-horsepower Twentieth Cen-

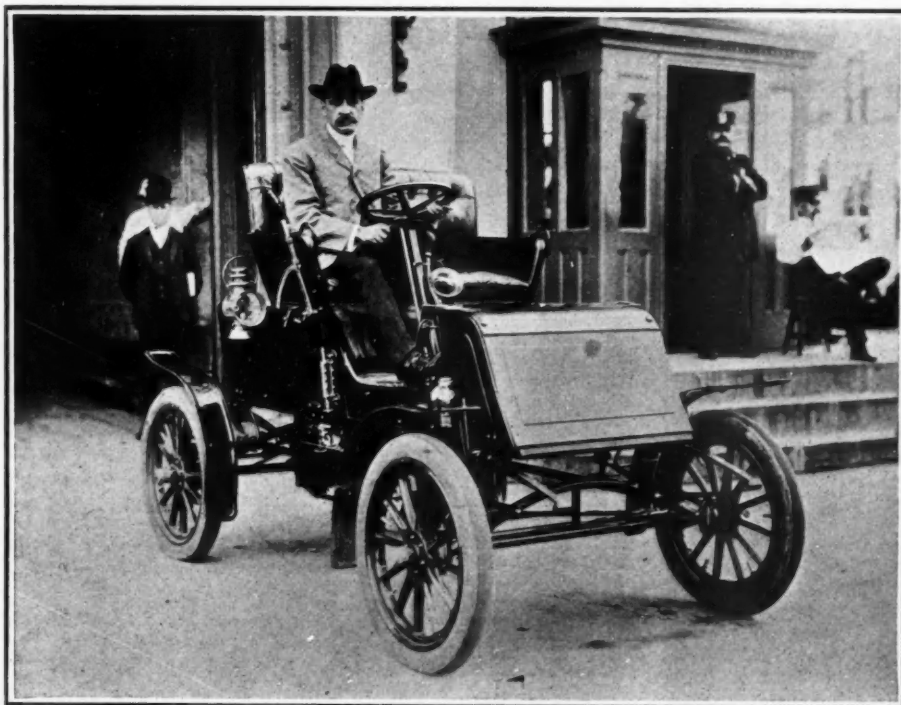


PARK COMMISSIONER MICHAEL J. KENNEDY, OF BROOKLYN AND QUEENS, IN A PARK DEPARTMENT RAMBLER INSPECTION CAR.

tury gasoline engine, for patrolling the East river, in addition to two naphtha launches and four steamers.

#### EXECUTIVE OFFICERS.

Borough Presidents Martin W. Littleton of Brooklyn and George Cromwell of Richmond were supplied by the city with 16-horsepower Knox runabouts about a year ago, which they use for general inspection purposes within the limits of their very extensive territories. President Littleton's machine is reported to have covered 8,600 miles within the past year, "averaging 12 miles to a gallon of gasoline." As is the



SUPT. MANLEY, DEPARTMENT OF DOCKS AND FERRIES, IN STEAM LOCOMOBILE.

case with all the city automobiles used in that borough, the wear upon the tires has been severe, eight having been used within the year. The driver, who is furnished by the city, is paid \$1,200 a year.

Mayor G. B. McClellan, although the official head of the city government, is not furnished an automobile by the city, but possesses a Decauville touring car of his own, which he frequently uses upon a tour of inspection. Borough President Joseph Cassidy of Queens is the owner of a 60-horsepower American Mercedes, which is his personal property, but is also used by him for official business.

**Charles J. Macomber**, superintendent of the Muncie Gas Engine and Supply works, who went to St. Mary's, O., yesterday with his family in an automobile, had a narrow escape from probable death while on the way. While on the road southwest of Dunkirk a team of horses hitched to a nitroglycerin wagon frightened at the auto and ran away. The wagon was overturned, but fortunately there was no explosion.—*Munsie (Ind.) Star*.

INTEREST in New York and Boston automobile circles has for a week or more centered very largely in the Glidden Tour Trophy contest, and entries for it have been coming in rather freely. Up to last Saturday twenty-four entries had been received at the office of the Touring Committee of the American Automobile Association, at 31 West Forty-second street, New York, and so many other entries had been promised that it was decided to extend the time for closing of the list to July 8, three

Lowe, George H., Boston, White.  
White, Walter, Cleveland, White.  
Olds, Mr. and Mrs. R. E., Lansing, Reo.

Much excellent preliminary work has been done by the Touring Committee and the press bureau established by it. A well prepared folder of thirty-two pages has been issued, containing a map of the route to be followed through New England during the twelve days, also road directions and distances from city to city, articles of the Glidden Trophy deed of gift, lists of the local representatives appointed by the committee in the cities where night stops are to be made, of the hotels and garages selected for the tour, of the automobile clubs that are members of the A. A. A. and whose members are entitled to enter in the contest, and other useful information. Three pages at the back of the booklet are devoted to information regarding the St. Paul automobile tour, which will finish in St. Paul on July 4. The pamphlet is very attractive in form and appearance, and contains just the information that is most in demand preceding the actual start of the Glidden event.

Hotel accommodations, at reduced rates, are to be reserved before the start of the tour for all participants in the event, so that there will be none of the confusion and annoyance incident to the scramble for accommodations that has occurred in endurance contests of the past. Special arrangements have already been made for the housing of cars at the night stops. The Massachusetts Automobile Club has very courteously offered the free use of its excellent garage in Boston. At Bretton Woods and the Wentworth Hotel there will be no garage charges except, of course, for supplies and for cleaning when done by employees of the garages.

To make clear the object of the competition and the manner in which it is to be conducted, the deed of gift and the conditions governing the 1905 tour are here reprinted in full:

#### ARTICLES OF DEED OF GIFT.

FIRST.—The Trophy shall be known as "THE CHARLES J. GLIDDEN TOURING TROPHY."

SECOND.—The Cup shall be competed for annually, beginning with the year 1905, by members of any American automobile club affiliated with the American Automobile Association, or of any club in the world recognized by it. The club of which the winner is a member shall have the custody of the Trophy until it is won by another, and shall give to the American Automobile Association, or its successor, a satisfactory bond, with sureties, in the sum of three thousand (3,000) dollars for such custody.

THIRD.—The distance to be driven in competition shall not be less than one thousand miles, nor less than five hundred miles weekly, and shall be over regularly used highways in the country where the holding club is located, except in the years 1905, 1906 and 1907, when the contest shall be held in either the United States or Canada, or both.

FOURTH.—Each 1905 entry must be ac-

days before the start of the tour from New York. Herewith are the entries received up to the end of last week:

Lee, Elliot C., Boston, White.  
Temple, W. C., Pittsburg, Pierce.  
Speare, L. R., Newton, Mass., Winton.  
Whipple, H. W., Andover, Mass., Peerless.  
Glidden, C. J., Boston, Napier.  
Post, Augustus, New York, White.  
Breese, James L., So. Hampton, R. I., Mercedes.  
Edwards, C. J., Brooklyn, N. Y., Cadillac.  
Scott, R. P., Baltimore, Peerless.  
Page, Carl H., New York, White.  
Draper, George O., Hopedale, Mass., Packard.  
Hurlburt, W. B., New York, Packard.  
Church, A. W., New York, Decauville.  
Pierce, Percy P., Buffalo, Pierce.  
Pope, H. L., Hagerstown, Md., Pope-Tribune.  
Walker, C. E., Hartford, Pope-Hartford.  
Briscoe, Benjamin, Tarrytown, N. Y., Maxwell.  
Pardee, Col. K. C., Tarrytown, N. Y., Maxwell.  
Hutchinson, S. E., Philadelphia, Panhard.  
Cuneo, Mrs. Joan Newton, Richmond, L. I., White.  
Woods, Edwin H., Boston, Napier.  
Gilmore, E. C., Boston, Rambler.



accompanied by a fee of \$50. In event of failure to start, the entry fee shall be forfeited.

**FIFTH.**—The car shall be driven by the owner or a driver approved by the committee, the owner being a passenger in the car.

**SIXTH.**—All other rules governing the contest shall be fixed by a committee of seven, consisting of the president of the American Automobile Association (who shall be chairman), the donor, and the presidents of the Automobile Club of America, the Automobile Club of Great Britain and Ireland, the Automobile Club of France, the Deutscher Automobile Club, and the president of an automobile club in Canada to be recognized by the American Automobile Association, or representatives selected by the above-named persons. The chairman and two members of the committee shall constitute a quorum.

Under the provisions of section 6 of the foregoing articles, the Tour Commission for 1905 will be composed of: Elliot C. Lee, chairman, representing the A. A. A.; Dave H. Morris, president of the Automobile Club of America; George E. McQuesten, representing the A. C. of Great Britain; William K. Vanderbilt, Jr., representing the A. C. of France and the Deutscher A. C., and Charles J. Glidden, donor of the trophy.

This commission has prepared rules for this year's event and selected a touring route that is unrivaled in America for its good roads, magnificent and diversified scenery, and its superior hotel and garage accommodations. Starting from New York City on Tuesday, July 11, there will be night stops at Hartford, Boston and Portsmouth, and the tourists will arrive at Bretton Woods, Mount Washington, in the White Mountains of New Hampshire on Friday night. Saturday and Sunday will be available for side tours through the magnificent mountain district. Monday and Tuesday will be devoted to the second annual "Climb to the Clouds" on Mount Washington. Wednesday, on the return route, the tourists will go through the Franconia Notch and down the valley of the Merrimac River to Concord, N. H. Thursday night will be spent in Worcester, Mass., and on Friday the beautiful Berkshire Hills will be penetrated, and the stop for the night will be at Pittsfield. The following and last day of the tour will see the tourists making their way through Lenox, Stockbridge and Great Barrington, thence down the bank of the Hudson River from Poughkeepsie to New York City, where the tour ends.

#### HOTELS AND GARAGES.

The hotels and garages appointed for the tour are as follows:

Hartford, Conn.—Allyn House, The Heublein; Palace Automobile Station, 122 Trumbull street.

Boston, Mass.—Lenox Hotel, Bellevue Hotel; Massachusetts A. C. Garage, 761 Boylston street.

Portsmouth, N. H.—Hotel Wentworth; Hotel Garage.

Bretton Woods, N. H.—Mount Pleasant, Mount Washington; Hotel Garage.

Concord, N. H.—Eagle Hotel; Hotel Garage; Mosely & Sanborn, 176 North Main street.

Worcester, Mass.—Bay State House; Central Automobile Exchange, 43 Foster street; Harrington's Auto Station, 31 Central street; B. A. Robinson, Church place; Palace Auto Co., Main street.

Pittsfield, Mass.—Wendell Hotel, The Maplewood; Central Automobile Station.

The Touring Committee has appointed the following representatives at the night controls:

Hartford, Conn.—C. H. Gillette, Hartford Automobile Club.

Boston, Mass.—Lewis R. Speare, Newton Automobile Club.

Portsmouth, N. H.—Mr. Wood, Wentworth Hotel.

Bretton Woods, N. H.—John Anderson, Mount Washington.

Concord, N. H.—F. L. Johnston, E. H. Fogg, Granite State Automobile Club, Manchester, N. H.

Worcester, Mass.—Asa Goddard, Worcester Automobile Club.

Pittsfield, Mass.—Franklin Weston, Berkshire Automobile Club.

The A. A. A. Touring Committee for 1905 is composed of: Augustus Post, Long Island A. C., chairman; C. J. Glidden, Massachusetts A. C.; W. C. Temple, Pittsburg A. C.; A. R. Pardington, Long Island A. C.; James L. Breese, A. C. of America; H. W. Smith, Syracuse A. C.; M. M. Belding, Jr., A. C. of America; L. E. Myers, Chicago A. C.; Walter C. White, Cleveland A. C.; A. B. Lambert, A. C. of St. Louis; William Moneypeny, Jr., Columbus A. C.; Frank A. Garbutt, A. C. of Southern California, and A. B. Tucker and M. L. Downs, representatives for the Glidden Tour.

#### RULES OF THE CONTEST.

It will be seen from the following conditions of the contest that the rules are not onerous and that, owing to the latitude allowed contestants in the matter of starting and finishing at controls and the freedom from restrictions, penalizations, observers, and the like, the event is, as its name implies, more in the nature of a pleasure tour than an endurance run or reliability contest.

#### I.—CONCERNING ENTRANTS.

1. It will be assumed that every contestant is acquainted with the rules of the contest, and by entering therein agrees to abide by said rules, agrees to accept the official records, and authorizes the A. A. A. to publish them in such manner as it shall determine.

2. In the event of a dispute concerning the interpretation of the rules, the decision of the Glidden Committee shall be final.

3. The Glidden Committee reserves the right to alter or amend these rules from time to time as they may deem expedient.

#### II.—QUALIFICATIONS.

4. Each contestant shall be a member of a club recognized by the American Auto-

motive Association, and shall have been a member for at least thirty days.

#### III.—ENTRIES.

5. The time for receiving entries, accompanied by the regular fee, will expire two weeks before the date set for the contest, and the entries for the 1905 event must be accompanied by a fee of fifty dollars (\$50).

6. Each entrant furthermore agrees that he shall hold the A. A. A. harmless in case of a lawsuit.

7. It is one of the conditions upon which entries of cars are accepted by the A. A. A., that the A. A. A. shall not be responsible for any damage that may be done to the car or its contents during the tour, nor for the theft of the car or any of its accessories or contents, same being at all times subsequent to such entry, and until the close of the tour; at the risk in all respects of the person entering same.

8. Each entrant shall give all details asked for in entry blank.

9. The A. A. A. reserves the right to refuse an entry without giving a reason.

#### IV.—TOURING CONDITIONS.

10. The car shall be driven by the owner or a driver approved by the Glidden Committee, and not changed unless such operator is incapacitated during the contest, the owner being a passenger in the car.

11. Cars must have mufflers and mud guards and be equipped as per manufacturer's catalogue specifications.

#### V.—NUMBER.

12. Each car shall have prominently displayed an official number on each side, or on front and rear of car, numbers to be allotted in order of entry.

13. No sign or other indication of the maker's name shall be displayed other than the nameplate, which is usually attached to the vehicles, as sold to private owners, nor any record of any previous performance.

#### VI.—CONTROLS.

14. Cars shall be privileged to start each morning between six and ten o'clock, but neither before nor after the hours designated except with the penalty of a discredit mark.

15. Each car to retain a perfect score must register before nine o'clock at each night stop, and on arrival, must take its place immediately behind the car in front until it can be properly recorded.

#### VII.—SPECIAL HILL CLIMB.

16. If the committee finds upon arrival in the White Mountains that a hill-climbing course is available, it may arrange a special contest for the participants of the tour. In this event, as in the tour itself, the question of speed will not count in favor of a car, since the test will be utilized simply for the purpose of exacting one of the conditions of ordinary touring.

The committee may also select a special run in the White Mountains, in order to complete the total mileage of 1,000 miles during the tour.

#### VIII.—AWARD.

17. At the conclusion of the tour the duly qualified owners, whose cars have finished the tour and complied with all the conditions thereof, will be asked to name by ballot the three competitors who, in their opinion, have accomplished the best all-around touring, and submit same to the commission appointed under the Deed of Gift. This information will be used by the commission in deciding the winner.

18. In order to be eligible to vote entrants must have completed the entire route and duly registered at each night stop, and fulfilled all other conditions asked by the committee.



19. Certificates will be given to all entrants who successfully finish the tour.

#### IX.—ROAD REGULATIONS.

20. Obey laws and follow rules of road.

#### X.—DISQUALIFICATIONS.

21. Upon due notice being served by the committee or the person in charge of any car, it shall cease to run in the contest, and the numbers shall be removed. It shall not receive any award; but it shall be mentioned in the records as having been disqualified, and the contestant shall have no claim on the A. A. A. in respect to non-publication of its performance or the publication of disqualification.

22. No notice shall be served unless the person in charge has been first notified of the act which it is claimed should disqualify the car. If the act be disputed, action shall be postponed until the committee shall take evidence and render a decision. The person so disqualified shall have no claim on the A. A. A. of any kind or nature whatsoever.

#### XI.—PROTESTS.

23. Anyone desiring to enter a protest must deposit ten dollars (\$10) with a member of the committee, which sum will be retained by the A. A. A. if the protest is not sustained. He must submit his protest in writing, when it will be considered by the committee at the earliest practicable moment and decision rendered.

(1.) As to entries, protests must be made before the start.

(2.) As to unfair running, route, etc., within twenty-four hours of the occurrence.

(3.) As to any other matter, immediately after the tour is concluded.

#### XII.—POWER OF THE COMMITTEE.

24. The committee shall have power to disqualify a car for traveling at a speed, in any place, which they may conceive excessive, without reference to these rules.

25. The committee shall have power to make such examination of the cars as it may deem necessary.

#### "CLIMB TO THE CLOUDS" OFFICIALS.

The list of officials selected to conduct the annual "Climb to the Clouds" up Mount Washington, White Mountains, New Hampshire, July 17 and 18, has been announced by Secretary W. J. Morgan, of the White Mountains Roads Improvement Association, under the auspices of which the event will be held. The list is as follows:

Honorary referee, Robert Lee Morrell, chairman Racing Board of the A. A. A.

Referee, A. R. Pardington.

Judges, Charles J. Glidden, Lewis R. Speares, president Bay State Automobile Association; Harlem W. Whipple, and Elliott C. Lee, president Mass. A. C.

Timers, Chronograph Club of Boston, under the direction of John C. Kerrison, president.

Examiners and weighers, S. A. Miles, general manager N. A. A. M., and M. L. Downs, New York Motor Club.

Clerks of course, C. H. Gillette, Hartford A. C., and A. B. Tucker, associate secretary Glidden Tour.

Starter, F. J. Wagner, Chicago A. C.

Reporter, Alfred Reeves.

Announcer, Charles H. Hyde, president New York Motor Club.

Scorers, W. D. Woolson, secretary A. C. of Vermont; Augustus Post, Automobile Club of America, and Louis R. Smith, secretary New York Motor Club.

## Start of the Chicago-St. Paul Tour.

#### Special Correspondence.

CHICAGO, June 30.—Cheered by the farewells of hundreds of friends who had gathered to watch them leave, thirty automobiles with 100 passengers left the clubhouse of the Chicago Automobile Club this morning on the Chicago-St. Paul interclub tour. With the first break of day, signs of life began to appear about the club on Michigan avenue. There were the last things to be done; tanks to fill, tires to pump up, numbers to tie on, and baskets to pack. Ira Cobe, president of the club, was one of the first to appear. Assistant Secretary Spangler was also early. By 7.30 o'clock the boulevard was crowded with machines.

A few minutes after 8 o'clock Arthur Gardiner and N. H. Van Sicklen, in a pilot car, a Rambler, started the rush up

Pickup, Adams-Farwell; L. E. Myers, Columbia; M. K. Weens, White; Neils Buck, Rambler; Jesse Barker, Pope-Toledo; F. W. Creelman, Thomas; C. A. Coey, Thomas; Dr. W. A. Pratt, Yale; Dr. John Gibbs Lovell, Columbia; Arthur Gardiner, Rambler; W. H. Brown, Meteor; Walter C. White, White; Allen Blanchard, Buick; Edwin L. Thacker, Stoddard-Dayton; Dr. W. W. Tarr, Yale; Miss Anna M. Andrews, Reo; Edward Parradee, Knox; Oliver Crosby, Packard; A. J. Dimon, Pierce; H. K. Sheridan, White; Grace M. Young, Locomobile; F. W. Cornish, Winston; J. S. Harman, Columbia; L. F. Garlock, Mitchell; Robert W. Spangler, Knox; F. W. Hedgeland, R. M. Neely, Ira M. Cobe, R. G. Hauselein, F. M. Joyce, W. J. Christians, Charles Webster, F. X. Mudd, A. K. Laytu, E. W. Teale, Gus W. Pierce, B. Mercil and wife, V. E. Alland, E. R. Van Duren, W. C. Hull, T. W. Ingersoll, Dr. E. L. Mann, Herbert Anderson, S. B. Fleming, Frily Glohoner, G. G. Gibson, N.



MISS ANNA ANDREWS, ONE OF THE LADY AUTOISTS IN THE CHICAGO-ST. PAUL TOUR, AT THE WHEEL OF HER REO CAR.

the avenue to Jackson boulevard, and the St. Paul tour was on. Up in the front of the caravan was President Cobe. Driving near him was Miss Anna Andrews, of Chicago. She drove her own car, a Reo. With her was a party of newspaper men. All along the way her appearance was the signal for volleys of cheers.

By 8.30 A.M. the last car had got away, and those elected to remain in the hot city, or to tramp the decks of crowded steamers, or the aisles of dusty excursion trains, went to their homes, envying the favored who were on their way over the country roads and winding pathways that led to the Twin Cities of Minnesota.

#### STARTERS AND THEIR GUESTS.

Following is a list of starters, the cars they are driving and the guests on the tour:

C. D. Miley, White; S. K. Martin, Jr., Locomobile; C. H. Fosgate, White; G. E.

H. Van Sicklen; Neils Buck, Frank H. Davis, E. Pratt, H. W. Schlueter, F. W. Creelman and wife and Helen Creelman, Joseph Beilfield, W. S. Kelly, A. L. Moore, Robert B. Upham and wife, Alton Schmidt, E. T. Corning, J. W. Bate, R. MacLeod, Mrs. C. W. Hodgekinson, E. E. Rockwell and wife, Fred J. Pardee, William J. Atlee, G. L. Rothrock and wife, C. A. Bartholomew, Dr. A. C. Lee and wife, F. H. Rhodes, Hattie C. Rhodes, Jennie Rhodes, E. J. Rhodes, G. E. May and wife, Miss Jennie Manatroy, Miss Leah Rubenstein, E. C. Brown and wife, Miss Marion Sturtevant, A. T. Perkins and wife, Harold and Mildred Harman.

The party will spend four days on the road. The first stop will be at Rockford, this evening, for the night. To-morrow night the party will stay in Dubuque, Iowa. Sunday evening they will remain in Charles City, Iowa. Monday night, Austin, Minn., is the stopping place. On the afternoon of July 4, the Chicago people, escorted by the

Automobile Club of St. Paul, will enter that city, proud, probably tired, but happy in the remembrance of a touring trip of 490 miles, a new record for the Chicago club.

President Cobe carries letters to Gov. John A. Johnson, of Minnesota, from Gov. Charles S. Deneen, of Illinois, and John Farson, president of the Illinois State Automobile Association and vice-president of the American Automobile Association. Governor Deneen's letter was as follows:

"The Hon. John A. Johnson, Governor of Minnesota, St. Paul, Minn.

"MY DEAR SIR:—This will serve to introduce to you members of the Chicago Automobile Club, who have made the journey to your capital city overland to pay their respects to the Governor of Minnesota. They are types of our enterprising citizens and fitly represent the capable men who have made the name of Chicago a house-

## ARRIVAL AT ROCKFORD.

### First Day's Run Ends with Merrymaking as Guests of Rockford Club.

*Special Correspondence.*

ROCKFORD, June 30.—The thirty cars that left the Chicago Automobile Club at 9 o'clock this morning are, with two exceptions, safely housed at Rockford to-night. A. J. Diamon, with a Pierce Stanhope (No. 41) broke a crankshaft at Addison, twenty miles out, and Dr. W. A. Pratt, with a Yale (No. 6) broke a spring at Harmony, thirty miles out. These cars will be repaired, and will join the rest of the tourists Saturday.

The run of ninety-three miles to-day was a delightful pleasure trip. The roads were in fine condition, the sun hid behind a cloud, and the ride was cool and free from dust.

The party was met at Belvidere by the

although the roads then were exceptionally bad on account of severe rains.

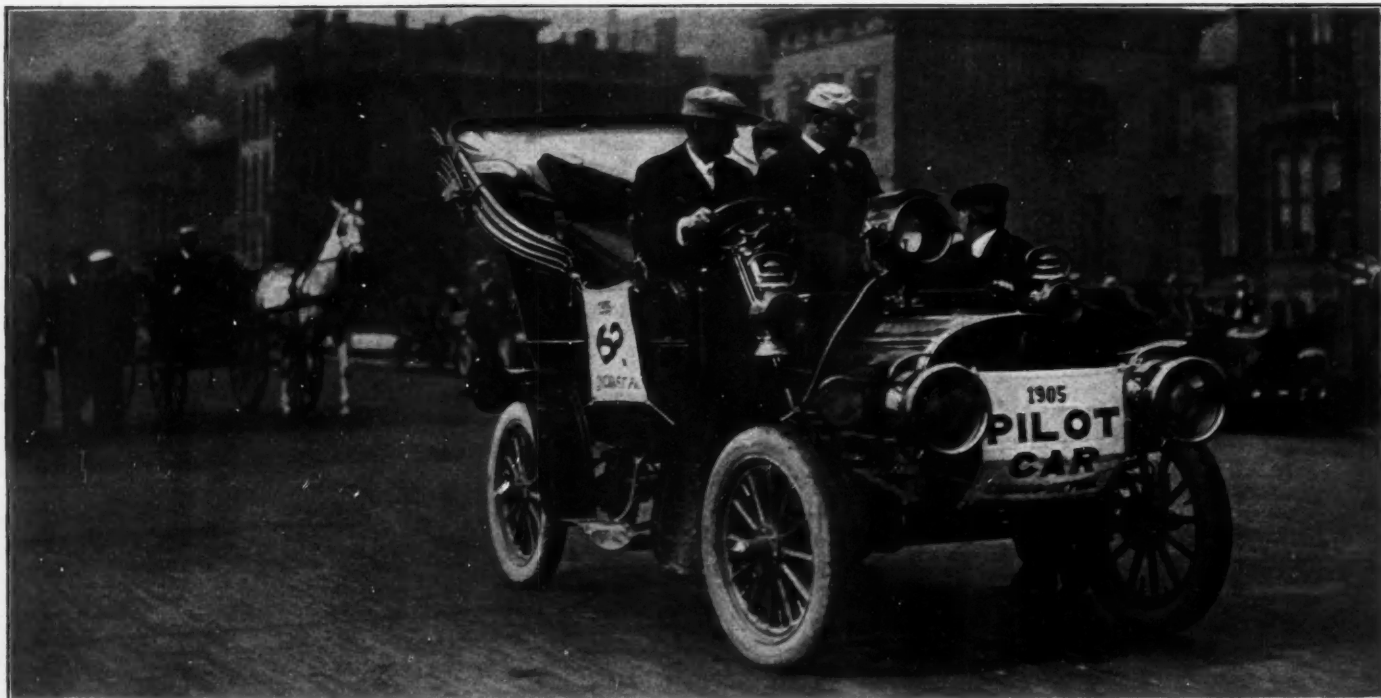
The farmers to-day showed their goodwill by decorating their houses and throwing bouquets of flowers into the cars. There are about twenty ladies on the trip, and all are enjoying it so far.

## AUTOS AND YACHT RACES.

### Interesting Track and Lake Events Arranged for St. Paul Carnival Week.

*Special Correspondence.*

ST. PAUL, July 1.—There will be more than 200 starters in the various events scheduled for the race meet which will begin at the Hamline race track next Tuesday afternoon at 3 o'clock. If the weather is favorable, Barney Oldfield, Louis Chevrolet, Webb Jay and possibly others will enter the



RAMBLER PILOT CAR, WITH LOAD OF CONFETTI, STARTING ON CHICAGO-ST. PAUL TOUR—ARTHUR GARDINER AT WHEEL.

hold word throughout the world, and I cordially recommend them to your courteous consideration.

"Yours truly,

"CHARLES S. DENEEN."

Five members of the St. Paul club made the start with the Chicagoans, their cars having been shipped to Chicago to join the run. They were: Dr. E. L. Mann, T. W. Ingersoll, R. M. Neeley, A. L. Dimon and Oliver Crosby and family.

It is more than likely that the racers will not start for St. Paul next Monday morning. If they do, not more than two factories will be represented. The start is announced for 3 o'clock in the morning.

**News note,** date 2,005. "There are in New York several garages built exclusively for horses owned by wealthy men."

Rockford Automobile Club, which acted as escort into Rockford.

At this place the tourists were guests of the Automobile Club, which offered a steamboat ride up the river as the evening's entertainment. Dinner and dancing whiled away the time, with a few speeches interspersed to give the orators a chance.

A rainstorm to-night gives promise of endurance run weather and roads for Saturday, but the tourists retired at 11 o'clock, to be prepared for an early start for DuBuque, 105 miles, to-morrow.

Robert W. Spangler, secretary of the Illinois State Automobile Association, is making his second trip over the route with the pilot car "Blazing the Way," a 16-horsepower Knox. This car made the trip two weeks ago, covering the 500 miles without any engine trouble or even a tire puncture,

one-mile dash against the world's circular track record.

"Everything points to a successful meet," says Secretary Ledy, of the St. Paul club. "We have received more entries than we expected. Among the fast cars that will be here are the *Reo Bird*, *Comet*, *Packard*, *Grey Wolf*, *Lightning Bug*, *Pope-Toledo*, and *Thomas*, *Tornado*. The races will be held Thursday, July 6, and Saturday, July 8. The Hamline track is in good condition."

Special entertainment has been arranged for the lovers of yachting who are taking part in the tour to St. Paul. A regatta has been arranged, to be held at White Bear Lake Friday afternoon, July 7, and most of the fast Minnesota yachts have entered, among them *White Bear*, *Alpha*, *Moccasin*, *Barraclouta* and *Wanderer*.



## Harmsworth Cup Entries.

Two boats will race under the American flag in this year's contest for the Harmsworth cup—or, as it is officially called, the British International Trophy race—which will be held in Arcachon Bay, near Cherbourg, France, on September 11. One of the boats will be the *Challenger*, built last year by Smith & Mabley, of New York, for the Harmsworth cup race; and the other will be a boat, as yet unnamed, built by the same firm and similar in power, dimensions and general construction, to the *Challenger*. The *Challenger* is now the property of W. Gould Brokaw, by whom she has been entered in the great race; while the new craft belongs to the well-known automobilist, E. R. Thomas, to whose order she was built. In the accompanying engraving she is shown going at speed with her owner at the wheel.

While the *Challenger* failed in the attempt to lift the cup last year, her seemingly poor performance was due to her raw condition and lack of tuning up owing to unavoidable delays in getting the boat out of the shop and shipped across the Atlantic. Since then, after tuning up, she has done some remarkably fast traveling, and is now in far better fighting trim than when she entered last year's race.

The new craft, designed by Crane and fitted with S. & M. Simplex eight-cylinder motor of 150-horsepower, is in a general way similar to the older boat. The dimensions are the same—just under 40 feet long over all, and 5 feet 9 inches beam. The motor is also the same, built from the same drawings and patterns. Slight differences exist, however, in the lines of the hull, the result of the experience with the *Challenger*, the new boat being somewhat similar to the old *Vingt-et-Un*; while the motor is equipped with sheet copper water jackets instead of cast iron, and the inlet valves have been made slightly larger, being of the same size as the exhaust valves. Slight changes have also been made in the construction of the carbureter, with the idea of rendering it more efficient; and a magneto is used for the source of ignition current supply.

The lightening of the motor, together



CROWD WATCHING THE AUTO BOAT "WINTON," AFTER THE LAUNCH.

with the improved methods of construction used in building the hull, have resulted in a total saving of weight of nearly a thousand pounds—no small item in an extreme racing machine—and at the same time the motor has proved a little more efficient than that of the *Challenger*. Several trial runs have been made, and the builders state that the new boat has a speed of from half a mile to a mile an hour better than the older one. Both racers will be shipped to France some time this month, and will undergo their tuning-up process there. There will be ample time for preparatory work, and every opportunity to forestall such accidents as can be avoided by the working-out process.

The winner of last year's Harmsworth cup race was the *Napier Minor*; but she was protested by the second boat, the French *Trefle-a-Quatre*, because she had been substituted for *Napier II*, which had qualified for the final, but was disabled. The protest was sustained and the cup went to France.

## POWER BOAT RACE PROGRAM.

*Special Correspondence.*

BOSTON, July 1.—The Eastern Yacht Club of Marblehead, the leading yachting organization of Massachusetts, has announced an interesting series of power boat races, to be held off Marblehead harbor this summer. There will be four open races, the first to be held next Tuesday, July 4; the second on Friday, August 18; the third on Saturday, August 26, and the fourth of Saturday, September 2. Prizes of silver are offered in each event, and there will be nine classes providing they fill, on each day.

Besides the above events, the club announces three special open races for power boats, to be given on Thursday, Friday and Saturday, July 27, 28 and 29. In addition to the regular prizes, Rear Commodore W. O. Gay has offered a cup which will be awarded to the boat which, having started in each race, makes the smallest total elapsed time for the three races, four laps to each race.

## WINTON AUTO BOAT LAUNCHED.

*Special Correspondence.*

CLEVELAND, O., June 28.—A new auto boat which is likely to rank among the swiftest is the *Winton*, which was launched at the Clifton Club Grounds, Lakewood, near Cleveland, this morning. The trim forty-footer slipped from the ways in regular ocean-vessel fashion in the presence of eighty-five invited guests and the employees of the Winton factory, the occasion being made a Winton holiday.

Among those present were Courtland D. Cramp, of the Cramp Shipbuilding Company, and Louis R. Speare, the boat's future owner. Miss Caroline M. Speare christened the craft after traditional custom by breaking a bottle of champagne over its bow, after which it was given a trial trip, with Alexander Winton at the helm.

This is the first venture of the Winton Motor Carriage Company in the auto boat field. The boat is equipped with three four-cylinder fifty-horse power Winton automobile motors, and the hull is the product of Crownshield. After a thorough try-out on Lake Erie it will be taken East and entered in the more important power boat events of the season.



NEW AUTO BOAT FITTED WITH SMITH & MABLEY MOTORS ENTERED IN HARMSWORTH CUP RACE BY E. R. THOMAS.



## A. A. A. Race Meeting at Morris Park.

THE National Championship meet of the American Automobile Association was held at Morris Park, New York, on Monday and Tuesday, July 3 and 4, and an excellent program of races was arranged. The track, though dusty, was in good condition, and good racing was looked for on the opening day.

Monday's race meet, however, was shorn of much of its interest by a series of unfortunate accidents that scratched from the program the *Reo Bird*, the 90-horsepower Fiat driven by Paul Sartori and the new six-cylinder Thomas Flyer. The *Reo Bird*, while practicing before the races, skidded on the clubhouse turn, lost a tire and went through the inner fence, doubling up three wheels but doing no further damage, and throwing the driver, Dan Wurgis, who rolled over on the grass, dazed for a moment, but unhurt. Paul Sartori got lost in the dust of the back turn during his first race of the day—the heavyweight championship—and went through the inner fence, his huge machine picking up a twenty-foot length of iron pipe from the fence and carrying it into the field. Unfortunately there was a sixteen-year-old boy, Joseph Holihan, just inside the fence, and the flying iron struck him, inflicting serious injuries. His right leg was said to have been broken in two places and his left leg in one place; and it was thought his skull was fractured. Sartori was uninjured, but his nerves were all gone. In the same race the Thomas six-cylinder racer was disabled. While going around the turn at the clubhouse end of the track the right-rear wheel collapsed, and Roberts, who was driving, was rather roughly tossed about for a moment, but was not seriously injured. Just about this time news came filtering in from outside that two touring cars, one belonging to C. Oliver Ise-lin and the other to Charles Dale, had collided and that two or more ladies were painfully cut and bruised. People began to wonder if anything more was going to happen, but fortunately there were no more mishaps.

The racing surprise of the day was provided by Walter Christie's 120-horsepower racer, with a four-cylinder engine placed transversely at each end. In the first heat of the inner-club race for Dr. H. E. Thomas's trophy the double-ender representing the A. C. A. was pitted against the White steam racer of the Chicago A. C., and a grand race was anticipated. No sooner had the start been made than the gasoline car began to pull away from the rakish steamer, and the crowd immediately sat up and took notice. And when in the long straight of the back stretch Christie shot ahead, distancing the White, the people shouted, and it looked like a procession. Christie lost a front tire in the back turn, however, and could not even finish the first lap; the White finished the four laps in leisurely

time and took first place. The White car also won the heavyweight championship race in which the Fiat was driven by Sartori and the Thomas car came to grief; Webb Jay's only remaining competitor, Chevrolet, in Major Miller's 90-horsepower Fiat, was beaten by 19 seconds, the White making the last mile in the remarkable time of 49.3-5 seconds, according to the official timers. The 80-horsepower De Dietrich racer had been entered in this event, but was withdrawn.

In the Diamond Cup free-for-all the White and the Fiat again came together, with the same result, only that the White won by a wider margin. Later in the day Christie made an exhibition mile in 51.1-5 seconds, equaling the track record, his car running well.

The lightweight and middleweight handicap was won by a 24-horsepower Fiat. The tourists' novelty race went to the 12-horsepower Decauville, because the Wayne 16-horsepower car, which came in first by a wide margin, failed to obey the rules with regard to stopping for passengers. Guy Vaughan and the famous Decauville won the unlimited pursuit race, overtaking Eddie Bald in the 35-40-horsepower Columbia in 3.1-3 laps. The Bronx handicap was run in two heats and a final, the winner of the final being Comacho's 12-horsepower Franklin.

## Austrian Industry and Market.

Some impetus was given to the automobile industry in Austria, especially in Vienna, by the fifth annual international automobile exposition, held there during the last two weeks of last March, under the auspices of the Austrian Automobile Club. The purpose of the show was to foster the trade in self-propelled vehicles for industrial purposes as well as for pleasure.

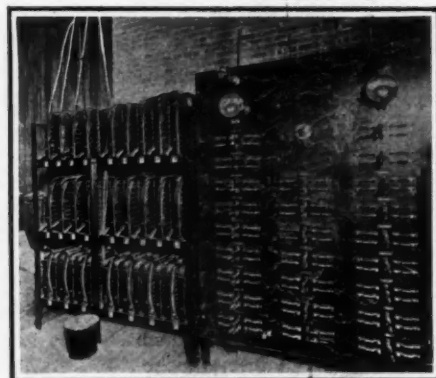
The development of the industry has been slow, it even having been said that it was confined to the manufacture of motorcycles. Only one automobile factory was built in Austria last year. The growth of the industry was threatened to be further retarded by a bill that was before the Parliament about the time of the show for the regulation of the use of automobiles; but the manufacturers and dealers collected statistics showing that in fact the use of automobiles was less dangerous than that of most other means of transportation, and that even dog-carts and children's carriages caused more accidents in Vienna than did automobiles. A commission was appointed and trials arranged, in which twenty-four of the commissioners, accompanied by army experts and members of the general staff and the technical corps with military cars, rode about the city and into the country to study grades. Apparently the trials were instructive, for the manufacturers and dealers are satisfied, according to United

States Vice-Consul Hogue, that the Austrian industry is no longer threatened by any contemplated radical regulations.

The automobile business in Austria does not offer inducements to Americans, considering the favor and sale of machines at home, and Mr. Hogue advises that until the home market has been supplied and it becomes necessary for our manufacturers to sell against hard competition and at small margins of profit, the market in Austria ought not to claim their particular attention.

## Pope Garage Equipment.

Electric automobiles form considerable percentage of the cars handled at the garage of the New York branch of the Pope Motor Car Co., and therefore it is necessary that there should be adequate facilities for taking care of the batteries—the storage battery being the most prominent portion of



CHARGING SWITCHBOARD.

the electric car, so far as the garage is concerned. Current for charging purposes is handled by a bank of twenty-five Cutler-Hammer rheostats, which, together with the switchboard used in charging small batteries, is illustrated by the accompanying engraving. The rheostats seen on the left, have a capacity of fifty amperes, with a voltage range of from 50 to 125 volts. Charging plugs are located at various points throughout the building, and all are controlled from the switchboard, where one man can watch the progress of charging each battery by taking frequent readings. The switchboard controls current for twenty-four charging plugs for ignition batteries, and the range of current is from half an ampere to ten amperes, with any desired voltage.

One of the features of the battery repair department is the manner in which the electrolyte is handled. Vats containing the fluid are elevated above the floor level, so that battery cells are filled by gravity, thus avoiding the necessity for carrying the electrolyte around in buckets, and the accompanying sloppiness and mess. Hoists are provided for handling batteries, and pits are conveniently located so that work on motors and other parts may be done without jacking up the cars.

## Wayne Light Car.

Now that manufacturers seem to have little difficulty in placing on the market cars that will run and, as a rule, run satisfactorily, the buying public is becoming more particular, and instead of being satisfied with anything on four wheels that will travel and keep on traveling, a machine of appearance is now demanded and expected. This demand has been recognized by many manufacturers, including the Wayne Automobile Co., of Detroit, Mich., whose Model D 16-horsepower light car is illustrated herewith. The round-topped hood, the individual seats and the sloping, round-ended rear deck combine in giving the machine a very smart appearance, while its 16-horsepower motor will, it is stated, carry it over any place where a car can go.

The motor is of the double opposed cylinder type, with a bore and stroke of five inches each, integral water jackets and valve chambers, and mechanically operated valves. The valves are all alike and interchangeable; the valve operating mechanism—cams, shafts and two-to-one gears—run in oil in the engine crankcase, where they are out of the way of dust and dirt and accidental knocks. Cooling of the cylinders is effected by water; the radiator occupies the usual position at the front end of the hood, and water is circulated by means of a double gear pump, gear-driven from the half-time shaft. Four gallons of water fill the cooling system, and is said to be sufficient for two hundred miles running under ordinary conditions. An automatic carburetor, of the float feed type, converts the gasoline into vapor and mixes it with the requisite volume of air, the mixture being practically correct at all motor speeds; the throttle is controlled by a small lever on the steering wheel column. Three concentric cylinders are used in the construction of the muffler, which is said to efficiently deaden the noise of the exhaust.

Planetary transmission, giving the usual



BATES 7-HORSEPOWER RUNABOUT WITH SINGLE-CYLINDER HORIZONTAL ENGINE.

two forward speeds and one reverse, is employed; the bearings are of bronze, and the gears all run in an oil bath in the casing. The drive is, of course, direct on the high speed. A lever at the side of the car controls the high speed and the reverse, while the low or hill-climbing gear is engaged by means of a pedal. Internal expanding hub brakes are fitted for emergency use, while for regular braking the reverse is used. Drive is by single chain to a sprocket on the live rear axle, the axle running on roller bearings.

Weldless steel tubing of heavy wall section forms the front axle; the front wheels, as well as the rear wheels, run on roller bearings. Wheels are of the wood artillery pattern, 28 inches in diameter, and are fitted with 3-inch detachable tires. The frame is of pressed cold-rolled steel with heavy corner plates; the motor is hung on the main frame, there being no sub-frame.

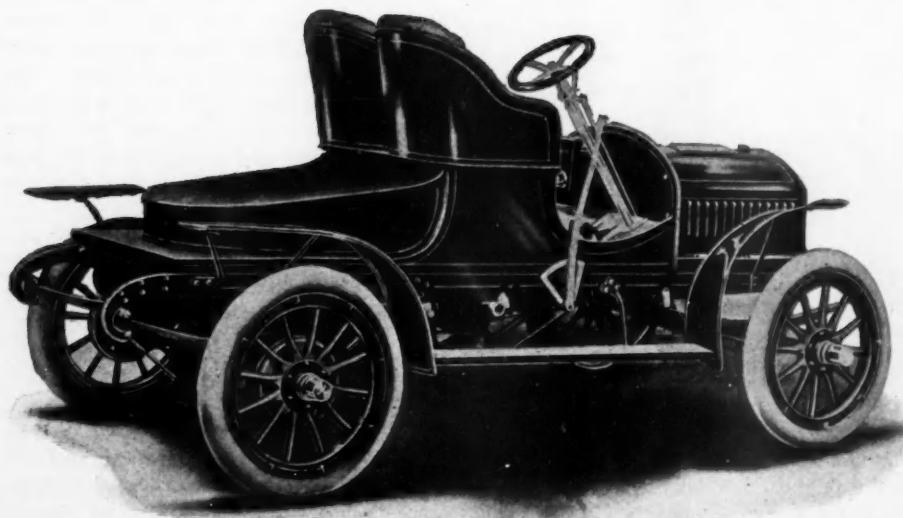
As the illustration shows, the body is made with divided seats, the car being built for two passengers only. The upholstery is in buffed leather, with curled hair padding. The finish is Brewster green, body and running gear being of the same color;

while the polished brass trimmings of the hood form a fine contrast to the dark color of the body.

## Bates Runabout.

Many persons who contemplate purchasing automobiles consider it a matter of great importance that the motor should be located under the hood; but still cannot or will not go to the expense of buying a car of an expensive type. The requirements of this class seem to be met by the two-passenger light runabout brought out by the Bates Automobile Co., of Lansing, Mich., whose little car is illustrated in the accompanying engraving. Not only the motor, but the entire power and transmission mechanism is covered by the hood, a long chain driving to the live rear axle, leaving the body of the car entirely free and clear.

The 7-horsepower engine is horizontal, with a single water-cooled cylinder, and is located on the left hand side, with its crankshaft lying across the frame; the fly-wheel is directly in the center, and the planetary transmission gear on the opposite, or right hand side. The valve end of the cylinder points forward, coming just under the forward end member of the frame. There are no packed joints in any part of the engine, the head, water jackets and valve chambers being cast integral with the cylinder. The inlet valve is automatically operated, and has an opening of 1 1/2 inches, the exhaust valve being of the same size. Crankshaft has 3 1/2 inch bearings and is 1 1/2 inches in diameter; the counter-weights are so attached that it is impossible for them to break loose and smash things—a good point, for a loose counterweight can do an incredible amount of damage in an incredibly short time. Drop forged steel of H-section forms the connecting rod, which is 12 1/4 inches long between centers and has bearings 2 1/4 inches long. The motor is rated at 7-horsepower. Jump spark ignition is fitted, the time of ignition being con-



WAYNE MODEL D 16-HORSEPOWER LIGHT CAR, WITH DOUBLE-OPPOSED MOTOR.



trolled by a lever on the steering wheel. A special form of carbureter is used; this carbureter has no float, and is said to be automatic in supplying the same quality of gas at all motor speeds. Further, the manufacturers state that no priming is necessary when starting the motor, and that the mixture will never be so rich as to foul the spark plug and the inside of the cylinder after the carbureter has once been properly adjusted.

The frame is of angle steel, and the front part, where the motor is hung, is filled with wood in the angles. Springs are three-quarter elliptic. Roller bearings are applied to the live rear axle, while the front wheels run in ball bearings; the front axle is of the popular tubular type, fitted with Elliott steering knuckles. The artillery wheels, 28 inches in diameter, are fitted with 2 1-2 inch clincher tires. There are two brakes; a regular service brake on the differential, operated by a pedal, and contracting band brakes on drums on the rear hubs, operated by a lever at the right hand side of the driver. One lever controls the two forward speeds and the reverse, and the speed is said to be variable from two to thirty-five miles an hour. Wheelbase is 76 inches and tread standard. The weight of the car is a little more than 900 pounds.

### Foreign News Notes.

Prince Henry, of Prussia, Princess Charlotte, of Saxe Meiningen, and the Grand-duke of Mecklenburg-Schwerin are among the seventy entrants for the Herkomer competition in Austria. The two first-mentioned royalties are brother and sister of the German emperor. Other entries have been received from England, the United States, Austria, France, Belgium, Switzerland and Sweden, thus making the contest a most representative one in every way.

Rumor has it that Baron de Zuylen is thinking of resigning his position as president of the Automobile Club of France, and that Prince Pierre d' Arenberg would, in that case, be nominated as his successor.

A "Gordon Bennett March," in rag-time, is about to appear for sale; the composer is a Frenchman.

Children's motor clothing has become a feature of the big London establishments owing to the demand for sufficiently workmanlike protection against wind, wet and dust for the little ones when on tour. A waterproof bag to envelop the feet and usually bare legs of small boys and girls is one of the principal requirements, as well as goggles with plush pads and shower-proof overalls.

The firm of Panhard & Levassor has abandoned the manufacture of its 7-horsepower car, and will instead market a three-cylinder 8-11-horsepower machine, which has been under test for some time.

Mr. Kipling says that motorists now "move in the odor of sanctity." The next time an automobile passes you will realize what sanctity smells like.—*Exchange*.

## Letter Box

### Municipal Licenses Not Recognized.

Editor THE AUTOMOBILE:

[225].—On a tour I shall make this Summer I will pass through the following States: Indiana, Ohio, Pennsylvania, New York, Connecticut, Rhode Island, Massachusetts, New Jersey, Vermont, New Hampshire, and Maine.

Will my Chicago license and number (we have no State law in Illinois), be enough in any or all of these States, or must I register in any of them, and if so which ones? I will not be in any one State to exceed two weeks. C. E. J.  
Chicago.

None of the State laws requiring registration provides for the exemption of owners of automobiles registered in and carrying the license numbers of cities. Some of the laws exempt non-residents who are registered in any other State, territory or federal district; Michigan includes also foreign countries; but other States exempt only persons registered in the State or territory in which they reside. You will see, therefore, that municipal licenses are not recognized under the State laws.

Your only absolutely safe and legal course will be to take out a license in every State entered. You might get through any or all of the States named without trouble, on the strength of your Chicago license, through either the leniency of the police or their unfamiliarity with the new laws in their respective States. Apparently the spirit of the law is to exempt all non-residents who are registered elsewhere in such way that their identity may readily be traced, but the letter of the law does not fit the case.

We give you herewith excerpts on the point from the laws of the several States named:

INDIANA.—Non-residents are exempt if they "have complied with any law requiring the registration of owners in force in the State, territory, or federal district of their residence, and the registration number showing the initial of such state \* \* \* shall be displayed on such vehicle." The phraseology here might be interpreted to apply to the ordinances of cities within the State of residence.

OHIO.—The State law does not require registration. An ordinance now pending in Cincinnati exempts non-residents if they are registered in any other "municipality or State."

PENNSYLVANIA.—Non-residents must register with the "prothonotary" or the treasurer of a city or county in the State. A new law passed this year requires registration with the State Highway Commission, but the new law, we understand, does not become effective until next January.

NEW YORK.—Same as Indiana.

CONNECTICUT.—A new law just passed by the Legislature provides that "any non-resident \* \* \* who shall have complied with the laws of any other State or territory of the United States, requiring the registration of owners of motor vehicles \* \* \* and the display of identification numbers, and who shall cause the identification numbers \* \* \* together with the initial letters or letters of the state or territory issuing the same to be displayed on his motor vehicle while used or operated upon the public highways of this state, may use such highways, for a period not to exceed fifteen days in any one year \* \* \*" unless he should be convicted of violating the speed laws.

RHODE ISLAND.—"Automobiles \* \* \* owned by non-residents \* \* \* and driven by a person residing and registered in some other state may be operated on the roads of this state."

MASSACHUSETTS.—A non-resident who "has complied with the laws relative to motor vehicles and the operation thereof of the state in which he resides" may operate on Massachusetts roads for not exceeding fifteen days without registering, provided his car has "displayed upon it the distinguishing number or mark of the state in which the owner resides, and none other."

NEW JERSEY.—Non-residents must register with the Secretary of State.

NEW HAMPSHIRE.—"Automobiles \* \* \* owned by non-residents \* \* \* and registered in some other state may be operated \* \* \* subject to the speed limitations."

VERMONT.—Same as New Hampshire.

MAINE.—Same as New Hampshire, except where prohibited by special law or town ordinance duly authorized by the Legislature.

### Perfect Roads in Ontario.

Editor THE AUTOMOBILE:

[226].—We have here a club of about twelve members. Last season several interesting club outings were held. Several new machines are due here shortly and I look for an increase in our membership. The roads through this part of Ontario are perfect for autos and a large number of American tourists are to be seen driving through from Buffalo to Detroit. The run here from Buffalo via Niagara Falls is magnificent, and should be taken in by all tourists touching Buffalo.

HAMILTON AUTOMOBILE CLUB,  
James Moodie, Sec'y-Treas.  
Hamilton, Ont.

### Driver, Not Mechanician.

Editor THE AUTOMOBILE:

[227].—In reading an article on the French elimination trials, published in THE AUTOMOBILE for June 22, I noticed an error that has been made by a number of journals since the last elimination races, and should be corrected. Mr. Gustave Caillois did not drive last year as the mechanician for



Thery, but drove a car himself; numerous punctures prevented his being placed at the finish. As a matter of fact, Caillois' actual running time last year was considerably better than that of Thery, and had he not been troubled with punctures—I think he had eleven—he certainly would have won the 1904 elimination race. This year's Richard-Brasier team was exactly the same as it was last year, namely, Thery, Caillois and Stead.

E. B. GALLAGHER.

New York.

### Weak Mixture and Back Firing.

Editor THE AUTOMOBILE:

[228].—With regard to query No. 216, by J. L. S., in the "Letter Box" department of THE AUTOMOBILE of June 22, while the cause you suggested (slow closing of the inlet valves) is very likely at the bottom of the trouble, yet it may be due to a weak or slow burning mixture or to the spark not being sufficiently advanced. With a weak mixture combustion may not be completed until the motor has finished its exhaust stroke, or even until it has started its suction stroke. This is especially true at high speed. In this case the incoming gas is ignited and the flame passes back through the inlet valve to the carbureter. The remedy is to increase the richness of the mixture. In case the car seems to give full power at ordinary speeds and the carbureter is of the automatic air-valve type, the tension of the spring of the automatic air valve should be slightly increased. If the carbureter is one in which opening the air valve opens at the same time an extra air supply valve, the gasoline supply will have to be increased if the ratio of the throttle opening to the extra air opening cannot be altered.

Back firing may also be caused by retarding the spark suddenly when the engine is at high speed. The remedy in this case is first to slow the engine by means of the throttle and gradually retard the spark as the speed decreases.

HAROLD H. BROWN.

Boston, Mass.

Other correspondents have made suggestions similar to that of Mr. Brown—that the back firing might have been caused by a mixture so weak that it continued to burn until the next opening of the inlet valve. It would be interesting, and doubtless would be appreciated by our readers, if J. L. S., after getting his engine running properly, would state what the trouble proved to be and how it was remedied. In fact, if correspondents would give their fellow-automobilists the benefit of their experiences in this way much good work would be accomplished, and no one would be forced to wonder whether the suggested remedy was the correct one.

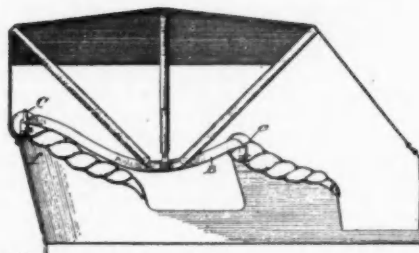
Fred Richardson of this city has purchased an electric automobile, and now will not have to take so many steps in working.—Boone, Ia., Standard.

## Patents

### Cape Cart Hood.

No. 792,112.—Wm. Beecher, of Chicago.

A cape cart hood with a mounting *B* so formed that it can be put in the irons *ef*, provided for a regular canopy top. It can



BEECHER CAPE CART HOOD.

be used only with a rear entrance tonneau. *C* indicates a prong to steady the bow when folded back.

### Steering Gear for Launches.

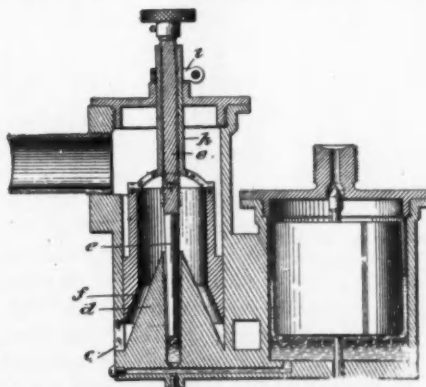
No. 792,121.—J. J. Donovan, of Peabody, Mass.

A rack and pinion steering gear of the usual sort, to which is added a split sleeve clamp for the rack shaft, by which it may be secured and left in any position required, as, for example, straight ahead.

### Carbureter.

No. 791,810.—J. T. Orr of Dillon, Montana.

This carbureter is designed to secure simultaneous regulation of the air passage and the spraying orifice, thus dispensing with a separate throttle. Relative adjustment between the two may also be obtained. In the drawing, *c* represents an air inlet, of which a number are disposed around the base of the mixing chamber. The air passes upward through the annular space between *d* and *f*, the latter of which is movable up and down for regulation. Attached to the



ORR AUTOMATIC CARBURETER.

upper end of *f* is a hollow threaded shank *h*, in which is screwed the stem *e*, whose lower end is slightly tapered and enters a tapering hole in *d*, so that the gasoline spray orifice has an annular shape. As *f* is moved downward *e* likewise is moved downward, thus reducing, on account of its

taper, the outlet for the gasoline. Simultaneous movement of *f* and *e* is secured by the lug *i*.

### Grease Cup.

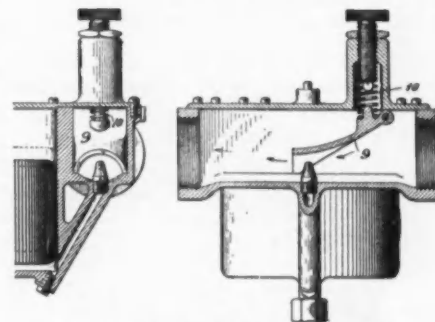
No. 792,858.—W. E. S. Strong, of Chicago, and C. I. Overton and G. C. Schoenborn, of Hartford, Conn.

A screw cap grease cup in which the threaded cap containing the grease is prevented from jarring loose by a split spring, threaded externally and arranged between two fixed members of the cup, so as to apply an elastic pressure to the threads of the cap to resist turning of the latter.

### Carbureter Regulator.

No. 791,447.—W. L. Breath, of Jersey City, N. J.

This is a simple and apparently effective device for varying the cross sectional area of the air passage past the spray nozzle. The air passage is located at one side of the float chamber, and is partially choked by a damper *9*, pivoted at one end as shown,



BREATH CARBURETER REGULATOR.

and movable up and down in the air passage, which is rectangular in section, as seen in the partial view. A spring *10* normally holds the damper down as shown, and it is elevated to a greater or less extent according to the intensity of the suction, thus preventing the velocity of the air stream past the nozzle from becoming so great at high motor speeds as to suck an excessive amount of gasoline.

### Carbureter.

No. 792,670.—C. D. Shain, of Rockaway Park, New York.

A carbureter whose spray nozzle consists of a socket in which a metal ball seats. This ball is allowed to lift to a greater or less extent under the suction, the extent of this lift being regulated by suitable means. A throttle valve is combined with the carbureter, and an automatic intake valve below the spray nozzle controls the intensity of the suction.

It isn't necessary to look at the world through rose-colored spectacles; auto glasses will give a very bright view.—New York Mail.

The Harrington livery barn at Goodland has added an automobile to its vehicle outfit. An innovation indeed for a country town.—Rennselaer (Ind.) Democrat.

# THE AUTOMOBILE

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## The Same Old "Times."

Readers of the *Times'* editorial in our news columns, and who recall our previous utterances on the subject, will share our "disappointment" that the New York *Times* has not changed its views about automobiling, and is not likely to. Not that it matters much to the well-informed what the *Times* thinks or says about automobiles, their construction or use; but there are doubtless many persons who read the *Times* who know little or nothing practically about automobiling and who, reposing confidence in the information and fairness of that paper, are sure to be misled by its editorial utterances on the subject. We have never been able to determine whether the attitude of the *Times* was due to gross ignorance of the subject or to malice—possibly a mixture of both. Its characteristic discussion of automobile matters without knowledge is very well displayed in its editorial criticism of THE AUTOMOBILE in these words: "It has harmed, not helped, the automobilist by defending him through thick and thin." That statement is absolutely and unequivocally false, as every reader of this paper knows. THE AUTOMOBILE has from the beginning advocated a strict compliance with the laws, has consistently discouraged scorching, even refusing to publish accounts of so-called record-breaking road trips, has expressed itself in favor of jail sentences for habitual offenders, and was the first to publicly advocate

the endorsement of convictions on drivers' licenses.

Another typical exhibit of the *Times'* methods—two-faced when necessary—is contained in the following parallel passages from its editorial pages:

"The race was utterly futile, proving nothing of interest and value to any one concerned in promoting 'sport' or the mechanical development of the practical and useful motor vehicle."

Extract from editorial on Vanderbilt race *New York Times*, October, 1904.

"From the first appearance of these vehicles the *Times* has fully and cordially recognized all their great possibilities for both business and pleasure, and its hostility has been, not to automobiles or automobiling, but to the abuses of them both—not to the manufacturers or the owners of automobiles, but to the frequent misapplication of ingenuity by the first and the too frequent lawlessness and discourtesy of the second."

Extract from editorial *New York Times*, June 26, 1905.

This is just a sample of what the *Times* had to say about the Vanderbilt race—the most notable achievement of a great and growing industry which gave the American car a standing in the eyes of the world that it never before possessed. And the race was held in strict compliance with the provisions of law.

The position which the *Times* has made for itself in the estimation of all fair-minded persons in the trade is certainly not an enviable one. This can readily be learned in a few minutes' conversation with any of the leaders in the trade in New York. The conspicuous scarcity of trade announcements in its pages (though it makes strenuous efforts to secure business) is an outward and visible sign of the feeling of the trade.

Perhaps the exigencies of trade will teach the *Times* some day that there is just as large a proportion of honorable, law-abiding citizens in the automobile industry as in banking or stock brokerage, or any other class with which it is more familiar. The trade would have more respect for the *Times* were it consistent in its denunciation of the automobile and not affecting a virtuous attitude now that there is valuable patronage in the gift of the industry.

## Large Internal Combustion Motors.

While public attention has been centered on the development of the type of internal combustion motor used in automobiles and motor boats, the stationary gas engine of large power has been making not less remarkable, if less publicly conspicuous, progress. Having made the automobile what it is, displaced steam for small boats and other purposes where small economical power is required, the gas engine now seriously threatens the large steam engine, hitherto unapproached for economy and reliability, and in many instances has actually displaced its older rival. This is

remarkable in itself; but it is doubly significant when it is considered that the large gas engine is the result of but six or seven years' development, and that the problems that must be solved are much more difficult than in the case of steam. A paper on "The Growth of Large Gas Engines on the Continent," recently read before the British Institution of Mechanical Engineers, at Liege, by Rudolphe E. Mathot, of Brussels, takes up the subject extensively and in a manner most interesting to gas engine designers and students. In leading up to a description of the various improvements that have made possible the building of an internal combustion engine of 3,600-horsepower, where six years ago one of 200-horsepower was considered remarkable, M. Mathot refers to the recognized difficulties attendant upon the work as follows:

"Steam is \* \* \* a fluid much less complex in nature than explosive mixtures. The action of steam is governed by precise laws which pertain only to the sphere of physics, while the production of combustible gases and their mode of evolution under the form of explosive mixtures in engines are as much within the domain of chemistry as of physics and mechanics. Although the generic theory of gas engines has rested up to the present on a series of hypotheses which have not yet received experimental confirmation, these engines have gained ground in application to various industries with exceptional rapidity compared with any other kind of motive power."

A perusal of this document, which will repay the student, shows that many interesting developments have accompanied the growth of the stationary internal combustion motor. Hit-and-miss governing, for instance, has been completely abandoned, as has also the plan of varying the strength of the mixture; the modern effort is to automatically govern the admission of a mixture of uniform quality, so that the quantity shall be proportioned to the power required. Valves have assumed many forms, though the majority are modifications of the familiar poppet; valve actuating mechanisms consist usually of eccentrics and "roller-path levers." The cooling problem has been accompanied by the difficulty of making large cylinder heads and other castings that will safely withstand the combined pressure and unequal expansion by heat; this has been accomplished by careful designing. Not only cylinder heads and cylinders, but pistons and rods, have been water jacketed; and in one or two cases a hollow casting containing cooling water has been placed in the combustion chamber to reduce the internal temperature. The valve chambers, seats and stem guides are all thoroughly jacketed. An interesting fact is that in some large engines the water jackets are made integral with the frame castings and the cylinder so attached as to be free to expand. Ignition is almost always by make and break with magneto to supply the current; and an interesting point is that in



many large cylinders there are two simultaneous sparks in order to produce more rapid and uniform combustion of the charge. Starting these huge machines is commonly accomplished by compressed air, as the combustion of a charge while the piston is at rest produced stresses too great for safety.

The gas for these large engines is usually furnished by suction producers or by the waste gases of blast-furnaces; in some cases a separate pump serves to compress the charge and force it into the cylinder, while in others the familiar plan of making the piston act as its own pump is followed. Both two-cycle and four-cycle engines are made in large powers.

That many of the problems involved have been successfully solved is clearly shown by the numerous installations of large internal combustion engines not only on the Continent, but in the United States. Doubtless it will be only a matter of a little time before the great steam engines that now furnish the power to move the wheels of the world's commerce will be replaced by more economical and equally reliable internal combustion engines, whose fuel will be supplied by waste products or by gas-producing materials of the cheapest kind.



#### **Tours of National Interest.**

This month is made unique in American automobile history by the holding of two highly organized automobile tours, of unusual length and duration, one in the Middle West and the other in the New England States. The Chicago-St. Paul tour, which was begun last Friday by thirty cars, is the most ambitious attempt of this kind in that section, and is one of the straws that indicate how the West is coming into its own in automobiling. The carnival in St. Paul that fills the remaining days of this week, following the arrival of the tourists in the Twin City, will conclude just before the touring contest for the Glidden trophy begins in New York City, next Monday. Present indications are that a larger number of cars will start in this than in the Western event. The distance to be traversed—approximately 1,000 miles—is twice as great and the time to be consumed three times as long as in the Chicago-St. Paul tour.

The Pittsburg endurance run of October, 1903, was the last of the "reliability tests" promoted mainly in the interests of the manufacturers as a means for demonstrating the endurance and reliability of their cars—demonstration much needed in the earlier years of the industry. Necessity for convincing the public on these points having been served by such tests, their place has been taken by tours in which owners of cars may take part merely for pleasure and friendly rivalry. The Western tour is purely a pleasure affair, and the

## The "Times" Still Unconverted.

### Declares Nothing of Recent Occurrence Has Changed Its Views Calls The Automobile "Not too Important Little Paper."

IN our issue of June 15 we published an account of the arrest of the chauffeur of Adolph Ochs, publisher of the New York Times, for alleged violation of the speed law in Yonkers, New York, and of the subsequent dismissal of the case in Special Sessions. In the same issue we discussed the matter editorially, referring to an editorial on the case which appeared in the Times, and which we reproduced in full. Several days later the Times reopened the subject in an editorial paragraph, comment on which appears in the editorial page of this issue. The Times editorial follows:

"Few things are more irritating than to be credited with a change of opinion when one's opinion is exactly what it has always been. It is even worse than to be charged with such a change in the same conditions, for the crediting is an intimation, all too plain, that one has long been wrong, and for that the warmest of admissions that one is right at last is but poor, pale consolation when one is quite sure that one has been right all the time. Which introduces, after a fashion, the fact that a not too important little paper published in this city, The Automobile, affects a pleased surprise over the appearance in this column recently of what it calls 'a plea for the injection of a little common sense into the administration of the automobile speed laws of New York.' And it adds: 'Hitherto The Times has been famous (without the prefix 'in') for its fanatical—it would be unfair to write 'ignorant' about that thirty-story temple of learning—opposition to anything and everything pertaining to automobiles.' Now, the Times certainly has been, as it certainly is, opposed with much vehemence to not a few things that can be described—by stretching the language a bit—as 'pertaining to automobiles.' It has been and is

opposed, for instance, to the use of the public highways as race courses, either for the informal competitions of individuals met by accident or for elaborate contests between a score or more of machines highly specialized for speed. It has been and is the relentless enemy of every automobilist who willfully violates the laws of the towns through which he rides, who habitually disregards the rights and privileges of people on foot or in horsedrawn carriages. It has no new affection for the speed maniac or the reckless blackguard, and it purposes to preach the adequate punishment of both whenever opportunity offers. But this is far from being 'opposition to everything pertaining to automobiles.' From the first appearance of those vehicles, the Times has fully and cordially recognized all their great possibilities for both business and pleasure, and its hostility has been, not to automobiles or automobiling, but to the abuses of them both—not to the manufacturers or the owners of automobiles, but to the too frequent misapplication of ingenuity by the first and the too frequent lawlessness and discourtesy of the second. Instead of seeking motives for a non-existent revolution in our policy, The Automobile would have been much better employed in performing the not difficult task of learning what our policy is and has been—and in adopting that policy as its own. It has harmed, not helped, the automobilist by defending him through thick and thin, while we are sure that we, by drawing and maintaining a firm line between wise and decent automobilists and those who are neither, have helped, not harmed, the whole fraternity. However that may be, nothing of recent occurrence has changed our views or seems likely to do so."

Glidden tour, although in the nature of a competition, lacks the irksome rules that made the endurance runs more onerous than pleasant. The change marks the progress in American automobiling; having proved the reliability of our cars, we are now taking the next step of showing what a factor they may be in promoting intercourse between different sections of the country and sociability among owners and enjoyment of the natural beauties of our magnificent scenery.

The good results that may flow from such events are manifold. They make for good fellowship among owners and among manufacturers and dealers, for the continued improvement and refinement of cars, and for increased interest in the problem of highway improvement.



THE SORT of newspaper enterprise that leads to the publication of alleged information regarding a course to be selected for so important an event as the Vanderbilt Cup race before the roads to be used have even been chosen by the race commission, and while the consent of the county authorities

for their use for such purpose has yet to be secured, is, to say the least, discourteous to the men upon whom largely depends the success of the event. Opposition to the closing of the public roads for the purpose of holding an automobile race that is even of so much value to the future of the automobile industry of America as an international contest, has not yet been allayed among the agitators of Long Island, and premature publication of maps, photographs, and descriptions of roads that the race commission may be considering for the purpose has no other effect than placing additional obstacles in the way of the contest. As a matter of fact, no course has been decided upon as yet, and cannot be until the county commissioners grant permission for the use of the roads. The real intention of conciliation and friendliness which actuates the promoters of the race is likely to be misconstrued by the residents of Long Island when they see published accounts of the route. Such premature publicity can have no other effect than to make the requests of the committee for the use of the roads appear perfunctory and wholly lacking in the spirit of co-operation.



## TWO DAYS' RACING AT BRUNOTS ISLAND.

**Enthusiastic Crowds Witness Most Successful Meet—Chevrolet Again Wins Laurels—Close Finishes Mark Second Day's Events—Transportation Facilities Inadequate.**

*Special Correspondence.*

PITTSBURG, July 1.—Barring a series of accidents, which seemed unaccountable, the National Automobile Meet at Brunots Island, June 28 and 29, was a pronounced success. The weather on both days was ideal. Fully 6,000 persons were at the track, and their tremendous enthusiasm gave substantial encouragement to the sport of automobiling.

On the first day the crowd had some difficulty in getting across the Ohio River to the Island, as there was only one ferry and a small naptha launch in operation. The Automobile Club of Pittsburgh, however, came to the rescue, and provided several pleasure boats for the second day.

Earl Kiser carried off the honors the first day by putting his car, Winton *Bullet* No. 2, over the line ahead of Major C. J. S. Miller's 90-horsepower Fiat, whose driver, Louis Chevrolet, was hidden from view much of the time in a cloud of dust. Kiser made the five miles in 4:44 2-5, winning the \$2,000 trophy. This race was preceded by two events, in which local drivers participated.

Much delay followed the preliminary race, and it was evident at once that something was wrong between Kiser, Chevrolet and Oldfield. Time after time the judges rang the bell for a start, but Chevrolet was the only one who brought his car to the stand. He seemed confident of winning and apparently was willing to grant anything to get a race with his rivals. The judges finally announced that a dispute was on between the champions, two of whom, owing to the dangerous condition of the track because of excessive dust, were unwilling to make a regular start from the wire. It was finally agreed that Kiser and Chevrolet should make a flying start from the 1-2-mile post, the race to begin at the home wire, and the winner to race Oldfield and his *Green Dragon* in the next event.

Kiser took the pole at the start and the *Bullet* jumped into the lead and was fifteen lengths ahead at the end of the first mile. The crowd looked in vain for Chevrolet to overtake him. Instead, Kiser came under the wire 1-4 of a mile in the lead.

After the fifth event, Kiser and Oldfield raced for the National Championship. Kiser took the pole again at the start, but Oldfield passed him rounding the first turn. At the 3-8 pole Kiser's car broke down, putting him out of the race. Oldfield completed the five miles in 4:50 2-5.

Major Miller announced that he would protest the race on the grounds that the *Green Dragon* had no reverse gear and was not eligible according to the rules amended June 1, 1905. The racing between the champions gave Oldfield four points, Kiser two points, and Chevrolet two points.

Kiser's car could not be fixed up for the free-for-all, and Oldfield and Chevrolet started the race with the Frenchman at the pole. Barney took the pole at the quarter, but lost it again at the end of the fifth mile. The *Green Dragon* lost its right hind-wheel tire on the seventh mile, but Oldfield finished the race amid tremendous applause from the grandstand, with Chevrolet three-quarters of a mile in the lead.

The Cupid's race furnished the fun for the afternoon. W. C. Temple's car, driven by his chauffeur, Lester Wilson, won the

race. Society was out in force, and cheered loudly the frantic attempts of the young ladies to get a place in the racing cars.

Fast racing and ideal weather marked the second day of the meet. The Fiat and Louis Chevrolet had everything their own way, and Barney Oldfield, with his *Green Dragon*, was a poor second in the ten-mile championship, which the Fiat won by nearly a lap, in 9:53 2-5. Chevrolet gave nothing to Oldfield at the turns, and in the stretches pulled away from him.

In the five-mile free-for-all, Chevrolet and Oldfield came together again, and Chevrolet once more covered himself with glory. Barney took the lead, but in the third mile his rear right-hand wheel suddenly collapsed. Earl Kiser and Mrs. Oldfield tore around the track to the scene of the accident, but found Barney was not injured. The car was taken to the repair tent, but could not be repaired in time for Oldfield to enter the trial for record event.

The crowd on Thursday numbered about 5,000 persons. The races were held promptly, and were finished by five o'clock. The day's sport was much more interesting for the finishes were closer than on the previous day.

In the stock car events the Franklin 12-horsepower and the Pope-Toledo 30-horsepower made splendid showings. Charles Soules arrived too late the first day to take part in the earlier events. Later he entered the handicap, five miles from the scratch, and beat all other cars except the Franklin.

The following are the summaries:

### FRIDAY.

Five miles, for gasoline cars of 22-h.p. and less.—Winchester, Franklin, 1st; C. K. Hill, Franklin, 2nd; W. G. Larimer, Reo, 3rd. Time, 8:37 2-5.

Five miles for gasoline cars of 28-h.p. and less.—Collins, Peerless, 1st; Hodge, Pierce, 2nd; Winchester, Franklin, 3rd. Time, 6:44 3-5.

Five-mile Championship.—First heat: Earl Kiser, *Bullet*, 1st; Chevrolet, Fiat, 2nd. Time, 4:44 2-5.

Five-mile Championship—Final: Chevrolet, Fiat, 1st; Oldfield, *Green Dragon*, 2nd. Time, 4:50 2-5.

Ten miles, for stock gasoline cars of 36-h.p. and less.—Collins, Peerless, 1st; Hart, Pierce, 2nd; Haus, Pierce, 3rd. Time, 12:32 2-5.

Five miles, Cupid's race.—Wilson, Pierce, 1st; Haus, Pierce, 2nd; Collins, Peerless, 3rd. Time, 7:38 1-5.

Five-mile handicap.—Hill, Franklin (1:15), 1st; G. Soules, Pope-Toledo (scratch), 2nd; Hodge, Pierce (35 seconds), 3rd. Time, 7:18 3-5.

Ten miles, free-for-all.—Chevrolet, Fiat, 1st; Oldfield, *Green Dragon*, 2nd. Time, 10:00.

### SATURDAY.

Two miles, for gasoline stock cars of 22-h.p. and less.—W. F. Winchester, Franklin, 12-h.p., 1st; Gardner, 12-h.p. Franklin, 2nd; W. G. Larimer, 16-h.p. Reo, 3rd. Time, 3:22.

Ten miles, for gasoline stock cars of 28-h.p. and less.—D. P. Collins, 24-h.p. Peerless, 1st; F. Hodge, 24-h.p. Pierce, 2nd; W. F. Winchester, 12-h.p. Franklin, 3rd. Time, 13:43 3-5.

Ten miles, A. A. A. National Championship.—Chevrolet, 90-h.p. Fiat, 1st; Oldfield, *Green Dragon*, 2nd. Time, 9:53 2-5.

Five miles, for gasoline stock cars of 36-h.p. and less.—Charles Soules, 30-h.p. Pope-Toledo, 1st; Haus, 28-32-h.p. Pierce, 2nd; Hodge, 24-h.p. Pierce, 3rd. Time, 6:34 3-5.

Five-mile handicap.—Charles Soules, 30-h.p. Pope-Toledo (scratch), 1st; W. F. Winchester, 12-h.p. Franklin (35 seconds), 2nd; Collins, 24-h.p. Peerless (20 seconds), 3rd. Time, 6:35 3-5.

Three-mile handicap.—W. F. Winchester, 12-h.p. Franklin, 1st; Hodge, 24-h.p. Pierce (25 seconds), 2nd; C. Soules, 30-h.p. Pope-Toledo (scratch), 3rd. Time, 3:51 2-5.

Five miles, free-for-all.—Won by Chevrolet, 90-h.p. Fiat. Time, 5:00 1-5. Oldfield's *Green Dragon* met with accident and did not finish.

Three-mile exhibition.—Soules, 30-h.p. Pope-Toledo, stripped. Time, 3:26.

## ANOTHER COAST RECORD.

**Torley Establishes Frisco-Los Angeles Record for 4-Passenger Cars.**

*Special Correspondence.*

SAN FRANCISCO, June 25.—Harry Torley, of Oakland, driving a two-cylinder, eighteen-horse power Rambler car, accompanied by James McIntire, Will Fageol and Harry Hunt, of San Francisco, made the run between the *Chronicle* office in San Francisco and the *Times* office in Los Angeles Friday and Saturday of last week in thirty-nine hours and five minutes, establishing a record for four-passenger cars.

But for the fact that the party was lost for three hours during the second night out, it would have beaten the time made by Whitman and Hamlin a week earlier in a Franklin. Whitman's time was thirty-seven hours and fifty-three minutes, and his run was made from Los Angeles north. It is claimed that the run south, which was made for the first time as a continuous performance by the Torley party, is an hour and a half longer than the run north, owing to the grades being longer when the trip is made in this direction.

The trip was arranged by Fred A. Jacobs, of the Rambler agency in this city, and was begun by two cars, Mr. Jacobs driving the second car, accompanied by Frank Fageol, of San Francisco, Dwight Lefferto, of New York, and Robert Shingle, of Honolulu. Jacobs was an hour ahead of Torley at Santa Marguerita, when a broken roller ball compelled him to retire. He states that he believes the run can be made in thirty hours, and will make another trial in a couple of weeks.

## ST. LAWRENCE SEASON OPENING.

*Special Correspondence.*

FRONTENAC, N. Y., July 3.—Interest in power boating will soon turn toward the Thousand Islands. The splendid race courses at Frontenac and Chippewa Bay are adjudged to be among the finest in the world, and the events scheduled for this month and next will reveal the advantages of St. Lawrence waters to many visiting autoboot enthusiasts.

The launch owners who leave New York City on the cruise to the St. Lawrence via Albany and the Erie Canal on August 17 will be entertained at the Frontenac and Thousand Island Yacht Clubs upon arrival. The A. P. B. A. races for the gold Challenge Cup are scheduled for August 24 to 26 at Chippewa Bay, and several local races will also be held at Alexandria Bay and Frontenac as a trying-out for resident power boats of the racing class.

Alfred Costello, the leading spirit of the Frontenac yachting interests, has arrived here from New York, and is now arranging for a race on July 20, 21 and 22. A number of valuable trophy cups will be awarded as prizes.

The Frontenac club, organized last season, is the second club of this section to affiliate with the American Power Boat Association, the other being the Chippewa Bay Yacht Club. The former club expects to build permanent quarters this fall.

## SUCCESSFUL CLIMB IN MINNEAPOLIS.

After One Postponement Ideal Weather  
Favors Contest of Local Club Over  
Course on Riverside Hill—Large  
Entry List—Good Times Made.

### Special Correspondence.

MINNEAPOLIS, June 26.—The hill-climbing contest held by the Minneapolis Automobile Club this afternoon on the new Riverside hill, was witnessed by several hundred people, and excellent times were made. The event was postponed from Saturday to Monday, because of rain, and weather conditions to-day were ideal.

The best time over the 2,000-foot course was made by H. P. Watson's Fiat—34 seconds. The next best time was made by a Thomas Flyer, driven by Stromquist, in :37 1-4.

Stromquist in the 50-horsepower Thomas and Caulin's 40-horsepower Royal Tourist tied in Class A, each covering the course in 40 1-2 seconds. Later the tie was run off and the Royal won in :39 4-5.

The Stevens-Duryea, driven by H. E. Pence, won in class B in 44 seconds, two Olds machines securing second and third places.

The amateur events were run in much slower times than were the professional. Walter Benz, Ford, won the first event in 1:18 1-4; L. H. Fawkes' Rambler won the second in :52; J. J. Heinrich's Winton the third in :59; Asa Paine's Winton the fourth in :42 1-4, and Alf Pillsbury's Peerless, driven by E. H. Moulton, won the last event in :41 3-4.

The following are the summaries:

### SUMMARIES.

#### PROFESSIONAL EVENTS.

Car.	Driver.	H. P.	Time.
Class A.			
1 Royal Tourist	Anderson	40	:39 4-5
2 Thomas	Stromquist	50	:40 1-2
3 Buick	Reynolds	20	:53 1-4
Class B.			
1 Stevens-Duryea	H. E. Pence	20	:44
2 Olds	F. G. Winston, Jr.	20	:48 3-4
3 Olds	Hilden	20	:51 1-4
4 Reo	J. J. Barclay	16	:54 1-4
5 Franklin	Bergstrom	12	:54 1-4
6 Rambler	Ed. Clark	16	:49
(Not allowed because not officially entered.)			
Class C.			
1 Fiat	H. P. Watson	60	:34
2 Thomas	Stromquist	50	:37 1-4
3 Peerless	Savage	35	:39
4 Royal Tourist	Anderson	40	:40 1-2
5 Stearns	Nelson	35	:43

#### Class E, Continued.

Car.	Driver.	H. P.	Time.
6 Peerless	Savage	35	:43
7 Olds	F. W. Winston, Jr.	20	:50 3-4

#### AMATEUR EVENTS.

Class Two.			
1 Ford	Walter Benz	10	1:18 1-4
2 Cadillac	Reynolds	8	1:28 3-4
3 Holsman	L. F. Fawkes	10	Did not fin.
Class Three.			
1 Rambler	Ed. Clark	16	:52
2 Franklin	Bergstrom	12	:57 1-2
3 Marion	Simpson	16	:57 1-2
4 Rambler	Wellington	18	:57 3-4
5 Buick	Reynolds	20	1:01
6 Queen	Swanburg	16	1:01 1-4
7 Reo	J. J. Barclay	16	1:03
8 Autocar	Reynolds	10	1:15 1-2
9 Franklin	E. H. Moulton	12	1:18 3-4
10 Rambler	Dave Thomas	16	1:21
Class Four.			
1 Winton	A. C. Bennett	30	:59
Class Five.			
1 Winton	A. C. Bennett	40	:42 1-4
2 Pope-Toledo	H. E. Pence	30	:44 1-4
3 Thomas	Stromquist	40	:46 3-4
4 Prayer-Miller	W. C. Thornhill	24	:55 3-4
Class Six.			
1 Peerless	E. H. Moulton, Jr.	35	:41 3-4
2 Stearns	Nelson	35	:43
3 Peerless	E. H. Moulton, Jr.	35	:43 1-4

## FIGHTING CITY ORDINANCES.

Injunction Sought Preventing Collection of  
Vehicle and Operators' License Tax.

### Special Correspondence.

KANSAS CITY, June 30.—The Automobile Club of Kansas City has taken its first step in the legal fight against unjust city ordinances relating to automobiles. Application for an injunction directed against the license inspector, the chief of police and the city attorney has been made to prevent the collection of the vehicle tax and the operators' license tax. The hearing in the case has been set for July 8, and pending the hearing an agreement has been reached that there will be no more arrests until a decision is made. The city probably will take a change of venue.

The club contends that the vehicle tax of \$5 flat on all types of cars is unjust, as the tax on horse-drawn vehicles ranges from \$1.50 to \$6. The operators' tax is attacked on the ground that it is double taxation. Another objection is that an operator may qualify as a skilled operator by driving a steam car and have a license issued to him to the effect that he is qualified to operate any kind of car. The suit names specifically E. P. Moriarity, of the Automobile Club, and all other members of the club join.

A large increase in club membership has been noticed since the fight against carrying two large number plates was begun.

## TO TEST CALIFORNIA LAW.

Claimed Unconstitutional by County Attorney and Test Case Will Result.

### Special Correspondence.

SAN FRANCISCO, June 25.—The legality of the state automobile law is likely to be tested in the courts as a result of a warning given out by the District Attorney of Santa Clara county to automobile drivers to keep off the Mt. Hamilton and Santa Cruz mountain roads in accordance with the county ordinance. The action of the District Attorney is undoubtedly influenced by certain political interests in the county which are interested financially in the stage line up Mt. Hamilton to Lick Observatory, which had a monopoly of the traffic until the state law gave automobiles equal rights on all public highways with other vehicles.

Under the provisions of this law all conflicting county ordinances are repealed, and in view of the fact that automobiles make the run to Lick Observatory in two hours with ease, against six to seven hours for the stages, the stage company has been afraid its business would slip away from it. When the first car made the run up Mt. Hamilton after the passage of the new law, an effort was made to discourage further travel by unfounded stories of accidents and mobs chasing the automobilists. Two weeks ago the Automobile Club of California made a run to Santa Cruz over the Santa Clara-Santa Cruz mountain road, and the ease with which the run was made, and the freedom from accident, was a source of much chagrin to those who had predicted that the opening of these roads would be followed by a long list of fatalities.

Since the new law went into effect there has not been an accident on any of the mountain roads that had previously been barred to automobilists and the automobile interests are indignant at the present attitude of the Santa Clara District Attorney. That official, who is evidently backed by the supervisors, claims that the law is not constitutional as it comes under the head of class legislation, and also that there were fatal defects in the method of passing it. He claims that the county ordinances are still in effect and states that they will be enforced.

The Automobile Club of California, which was instrumental in having the state law passed, will undoubtedly make a test case in support of their measure.

## WISCONSIN REGISTRATION BEGINS.

### Special Correspondence.

MILWAUKEE, July 1.—The Secretary of State has begun sending out certificates of registration of automobiles. The new state law, which goes into effect next Saturday, requires that all automobiles shall be registered at the office of the Secretary of State. The Secretary has already received more than 600 requests for registration blanks.

Considerable trouble has been experienced in getting suitable numeral plates for the machines, but the design finally selected is expected to meet with general satisfaction. It consists of a metal plate, six by eleven inches in size, with aluminum letters five inches long. The numerals are followed by a large "W," showing that the machine is registered in Wisconsin.

The registration certificates will be issued in duplicate, so that the owner of a machine will always have an extra one in case of



ED. CLARK IN 16 H. P. RAMBLER WINNING CLASS THREE IN MINNEAPOLIS CLIMB.



accident to the original certificate. The first certificate will be issued to Judge A. C. Zimmerman, of Madison, a former law partner of Governor La Follette and an ardent automobilist.

### ALEXANDER TURNPIKE SUIT SETTLED

*Special Correspondence.*

CINCINNATI, June 30.—A settlement has been reached in the suit of Oscar Barrett against the Campbell County Turnpike Company which meets the approval of automobilists generally.

The original filing of the suit was directly due to the action of the turnpike company in forcing Mr. Barrett to pay a toll of several dollars for driving over the Alexander Pike in his automobile. The amount charged was greatly in excess of the regular fee charged other vehicles using the road, and was paid under protest. Mr. Barrett immediately thereafter bringing suit to restrain the company from making further exorbitant charges for the use of its pike by motor vehicles.

The conditions of settlement which were submitted by the turnpike company, and were accepted by the plaintiff, are as follows:

The Pike Company will issue a mileage book for automobiles. This book will be signed by the purchaser, shall describe his machine, is not transferable, and will be taken up by the company at its face value upon demand and presentation.

The rates of fare for all automobiles, or other motor vehicles, used as pleasure conveyances, shall be the same as other pleasure conveyances, viz.: Twenty cents for each five miles, except that a motor vehicle having seats for only two persons shall pay one-half of this fare.

The Alexander Turnpike crosses the river and leads down through Kentucky, and is one of the most popular drives in this section. The Automobile Club of Cincinnati actively supported Mr. Barrett in his fight for a uniform scale of rates for all vehicles using this road, and its members are well pleased with the settlement reached.

### TOWNSHIP REGULATIONS ANNOYING.

*Special Correspondence.*

WORCESTER, MASS., June 29.—Members of the Automobile Club are very much surprised because under the new state law which became effective on June 3, selectmen of the nearby towns have made in many instances prohibitive speed laws, and in but one instance has the local club entered a protest as provided under the new law.

The legal advisers of the club appear to have fallen into a deep sleep, and the grumblings of the members at their laxity were not enough to awaken them until the time limit in which protests might be filed with the State Highway Commission had expired.

Lancaster, a favorite half-day trip with automobilists of this section, has fixed the rate at eight miles an hour. Leicester allows twelve miles, and ten appears to be the favorite with the boards of selectmen at the various towns.

The club, through Attorney David H. Gay, has protested the ten-mile limit set by the town of Holden.

An agitation against automobilists has been started in Clinton, a town thirteen miles north of this city, and the autophobe is at present in full control of the situation. Summonses are being issued by the wholesale, and prominent automobilists of Boston and Worcester have been haled into court.

**A fully inflated tire has much less tendency to creep than one which is soft.**

### NEWS AND TRADE MISCELLANY.

An air-cooled gasoline motor, of the type in which the crankshaft remains stationary while the cylinders rotate around it, has been patented by the Brown-Winstanley Mfg. Co., of Los Angeles, Cal.

After considering the evidence submitted in the matter of the protest of L. H. Elmer against the Knox cars competing in the Hartford race meet June 16-17, Referee F. G. Webb has disallowed the protest and awarded to the Knox first and second places in the race for stock cars listing at \$1,000 to \$2,000.

The J. W. Schafer Electric Co., 18 San Ignacio, Havana, Cuba, has secured the agency for the Pope-Waverley electrics and Winton automobiles.

The secretary of the Automobile Club of America has announced that the clubhouse will close each evening at 7 o'clock during July and August. The Morris Park Motor Racing Club has extended to the members of the A. C. A. the privileges of its clubhouse at Morris Park on all days during the season, except on occasions of race meets.

About July 15, C. M. Ricketts, of the Canada Cycle and Motor Co., of Toronto, will attempt a Canadian transcontinental trip, going by way of North Bay, through Northern Ontario, thence to Winnipeg and through to the Pacific. Mr. Ricketts expects to complete the trip in about six weeks. He will travel in the *Russell*, a new Canadian-made car, and will be accompanied by a mechanic.

Harry J. Mortensen has opened a repair and storage station at 2006 Encinal avenue, Alameda, Cal.

W. J. Poole, who for a number of years was connected with the bicycle establishment of Leavitt and Bill, Oakland, Cal., has opened a well-equipped garage at 370 Twelfth street, Oakland, and in addition has secured the agency for the Wayne cars.

California Automobile Co. is now occupying temporary quarters at 1375 Broadway, Oakland, Cal., pending the completion of its new and commodious garage at Eighteenth street and Telegraph avenue. The company has the agency for the Cadillac and Buick machines.

G. A. Wahlgreen, promoter of the Pike's Peak Hill Climb, states that \$5,000 has been subscribed toward the expense of the contest, and twenty-five entries have already been received.

Francis A. Price has been appointed Highway Commissioner for New Castle County, Del., succeeding C. J. Horrigan, term expired. Mr. Price is a practical civil engineer, and a pioneer of the good roads movement in Delaware.

Walter N. Beecher, formerly with the Studebaker Brothers Mfg. Co., has been elected secretary and manager of the Limousine & Carriage Mfg. Co., 323 East Twenty-fifth street, Chicago.

The Cuban Electric Vehicle Co. has been organized at Havana, Cuba, with a capital of \$50,000. Rafael de Arozoza is president; Carlos Annoldson, secretary, and Oscar Annoldson, treasurer, of the new concern, and offices have been opened at 31 Mercadares street.

The Locomobile agency for Cuba has been placed with the Havana Garage Co.

The King of Spain is a recent purchaser, through the Paris agency of the Electric Vehicle Company, of a Columbia electric surrey. The Spanish monarch's garage contains several automobiles, but this is said to be his first electric.

A movement is being made to organize an auto boat club among the owners of power

boats on Lake Quinsigamond, near Worcester, Mass. There are now about fifteen boats in commission on the lake.

Plans are now being made for the construction of a two-mile automobile race track at Atlantic City. Charles R. Myers, proprietor of the Hotel Rudolf, and William H. Carroll have acquired and are reclaiming sufficient land not only for the track, but to provide lots for an attractive suburb.

The Detroit United Railway Company has added a Packard truck to its repair service.

Under a resolution recently adopted by the city council of Montreal, Canada, automobiles are prohibited from using the driveways in Mount Royal Park.

The Maple Leaf Automobile & Electric Mfg. Co. has been incorporated at London, Ont., with a capital of \$50,000, and will manufacture electrical appliances, dynamos and engines.

The addition to the plant of the Moore-Edenfield Electric & Mfg. Co., Augusta, Ga., has just been completed, and the building is being equipped with modern apparatus for automobile repair work. The addition is of brick, and is 30 by 85 feet.

### RECENT INCORPORATIONS.

Auto Cover & Top Mfg. Co., New York; capital, \$15,000. Directors—W. F. Fickling, P. H. Ray, New York; J. D. Lee, New Rochelle.

Automobile Improvement Co., Sandusky, O.; capital, \$15,000. Incorporators—J. S. Bennett, F. S. Felch, G. W. Putnam, Webb Sadler and C. H. Johannsen.

Interborough Rubber & Vehicle Supply Co., New York; capital, \$10,000. Directors—Frank Bourne, Joseph Fackora and La Mott Hartshorn, all of New York.

Park Auto Co., Wilmington, Del.; capital, \$20,000; to deal in motor vehicles.

Fitchburg Auto-Transit Co., Fitchburg, Mass.; capital, \$5,000; automobile passenger service. Officers—Horace F. Grove, president, and E. C. Ford, treasurer, both of Fitchburg.

Aster Company, New York; capital, \$250,000; automobiles. Directors—A. J. Myers, O. B. Kull and Alfred Epstein, all of New York.

Alaska Automobile Transportation Co., Olympia, Wash.; capital, \$500,000; to operate automobile service from Nome, on Behring Sea, to Solomon City and other points.

Princeton Garage Co., Princeton, N. J.; capital, \$2,100; repair and storage. Incorporators—Thornton Conover, Edward C. Ropp, Louis J. Campbell and Charles A. Wyman, all of Princeton.

Tuxedo Garage Co., New York; capital, \$40,000; to deal in, store and rent automobiles. Incorporators—Charles A. Gerlach, Sampson S. Lee and Hugo M. Hergert, all of New York City.

Auto Rapid Transit Co., Buffalo, N. Y.; capital, \$5,000; to manufacture automobiles, boats and vehicles. Incorporators—John M. and Catherine L. Campbell and Michael F. Dirnberger, Jr., all of Buffalo.

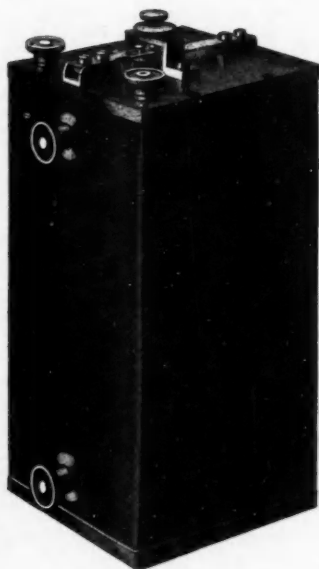
Carlson & Russ, Richmond Borough, New York City; capital, \$5,000; to manufacture engines, motors, car trucks and vehicles. Incorporators—Charles O. Carlson and John D. Russ, Staten Island, and Carl A. Erickson, Brooklyn.

Cuban Motor Tally-Ho Co., Ridgefield, N. Y.; capital, \$100,000; to buy, sell, store and repair automobiles and boats, and conduct livery business. Incorporators—Charles E. Codd, Havana, Cuba; George H. Wright, New York, and John H. Taylor, Newark.



## INFORMATION FOR BUYERS.

**IGNITION COILS.**—The Heinze Electric Co., of Lowell, Mass., is a firm that has been for five years engaged in the manufacture of electrical apparatus in which extremely high-tension currents have to be handled—such as spark coils for wireless telegraphy and x-ray work, capable of producing a spark fifty inches long—and is, therefore, well acquainted with the insulation problem and other questions connected with high-tension coil work. This



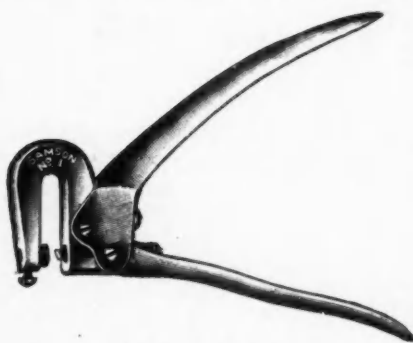
HEINZE SPARK COIL.

knowledge and experience has recently been brought to bear on the subject of spark coils for explosion motor ignition purposes, and these coils are now being manufactured by the Heinze Co., employing the same principles as in their large instruments. The secondary coils are insulated by layers of mica; the secondary sections are removable, so that in case of damage repairs can be effected without tearing the whole coil to pieces. The insulation of the primary coil consists of a tube of mica which, the makers state, cannot be punctured by the current. It is said that the coil cannot be burned out, as before the current could reach a strength sufficient for this the contacts would fuse and stick, preventing further action of the

vibrator. The coil is guaranteed not to burn out, and is said by the makers to give an exceedingly thick, hot spark.

**FRANKLIN TRANSCONTINENTAL. RUN.**—There are few journeys of any kind that are more remarkable than the trip made by a 10-horsepower air-cooled Franklin runabout from the Pacific to the Atlantic. The story of how the run was made in thirty-three days, is graphically told by L. L. Whitman, who, with C. S. Carris, took the little car across the mountains, over the American deserts and brought it safely to New York less than five weeks after leaving San Francisco. The story is printed in pamphlet form, issued by the H. H. Franklin Mfg. Co., of Syracuse, N. Y., and is entitled *From Coast to Coast in a Motor Car*; the journey is graphically though briefly described, bringing out forcibly the difficulties with which men and machine had to contend, and the thoroughbred manner in which they came out of each ordeal. Tales of breakdowns and repairs are conspicuously absent because, the "crew" states, they did not occur, the machine arriving in New York after its five thousand mile journey with little to indicate what it had been through.

**HANDY HAND PUNCH.**—A hand punch for perforating sheet metal, fiber, paper and so on, has been brought out by Samuel



NAFEW HAND PUNCH.

Nafew, of 453 Canal St., New York, and is stated by the manufacturer to be extremely well adapted to the work of automobile repair shops. The punch will make a 3-16-inch hole through 18 gauge sheet steel, and through soft brass or paper of any thickness up to the capacity of the throat opening.

With the tool is sold a box of extra punches and dies of various sizes, so that a wide range of work may be done with a single tool by using the extra parts.

### TRADE LITERATURE.

Jackson Automobile Co., Jackson, Mich. Booklet containing letters from those who have used Jackson automobiles, and who emphatically state that they like them.

Wolseley Tool & Motor Car Co., Ltd., adlerly Park, Birmingham, England. An interesting booklet, *A Pleasure Jaunt*, describing an automobile tour in which two ladies cruised around in England in a small Wolseley car.

Smith & Mabley, Seventh avenue and Thirty-eighth street, New York. Catalogue of S. & M. Simplex automobiles, illustrated, showing several forms of bodies, separate parts of the cars, chassis and line drawings of the chassis.

Edison Mfg. Co., 31 Union Square, New York, and 304 Wabash Ave., Chicago. Catalogue of Edison primary batteries and fan-motor outfits; detailed description of construction and properties of the battery and instructions for using.

Allyne Brass Foundry Co., Cleveland, O., and Detroit, Mich. Booklet illustrating a number of complicated aluminum castings for crank cases, gear cases and other automobile parts. These, together with special bronze bearing metal castings, are specialties of this concern.

The Electric & Auto Co., Amesbury, Mass. Circulars describing the Orswell spark plug, which is said to be so constructed that no high-tension currents are carried through external wires, and there is no ground connection, both sparking points being in the plug and insulated from the engine.

McGiehan Odometer & Mfg. Co., 137 West Thirty-second St., New York. Cards illustrating and describing the McGiehan combined speed indicator, trip odometer and total odometer; the McGiehan trip and total odometer combination instrument; and the McGiehan plain total odometer. The speed-recording instrument in the first combination registers up to 60 miles an hour; the trip odometer reads to 999 9-10 miles, and the total odometer to 99,999 9-10 miles. All these instruments are attached to the dashboard of the car and are driven by gearing on the front wheel hub, a flexible shaft being the connecting medium.

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## SPECIAL NOTICES

Advertisements inserted under this heading at 20 cents per line; about 7 words make a line. Remittance should accompany copy. Replies forwarded if postage is furnished.

**AUTOMOBILE PLANT** for sale, Eastern location, main line railroad; \$100,000 required immediately; only well rated parties need apply. Quick Action, care of The Automobile. July 6

**ANNUAL CLEARANCE SALE**—One 1904 Winton, with canopy, brand new, \$1,300. One 1904 Winton, like new, \$900. One single cylinder Knox, four passengers, folding front seat, elegant condition, \$450. One Haynes Apperson, 10 horsepower, with top, like new, \$600. One 1905 Olds runabout, new, \$550. One 1905 Olds light touring car, new, \$650. Five 1903 Oldsmobiles, splendid condition, \$250, \$300 and \$350. One Waverly electric, new batteries, good top, A1 shape, \$350. One National electric, same condition, \$300. One Ford, with tonneau, Fisk tires, 1903 model, just painted, fine shape, \$500. One Cleveland, four passenger, good condition, \$350. One Mobile steamer, almost new, \$150. One 1902 Winton, new tires all around, just painted, elegant condition, \$600. One 1904 Pope-Toledo, new tires all around, elegant condition, \$2,000. One Fredonia, 12-horsepower, four passengers, elegant condition, \$400. Fisher Automobile Co., 330 North Illinois street, Indianapolis, Ind. July 6

**BARGAINS** in second-hand automobiles. Mention the car you want. Kline Auto Co., Harrisburg, Pa. July 6

**BARGAIN**—Will exchange my 1904 White Touring Car for runabout. Olds preferred, and reasonable cash difference. Car in perfect condition, cape top, new tires, and run very little. Write full particulars. Address, C. A. Ludey, Marietta, Ohio. July 6

**EIGHT HORSEPOWER** gasoline truck; speed 16 miles; price \$650. Suitable for light hauling. For sale by Frank E. Pearce, Orange Valley, N. J. July 6

**FOR SALE**—A 4 cylinder 1905 Model Demonstrating Car side entrance tonneau, full equipment. Low price. Had very little use. A great bargain. A. L. Dyke Auto Supply Co., Walton and Olive sts., St. Louis, Mo. July 13

**FOR SALE**—Brand new 1905 Olds Touring Runabout, \$595. A., care The Automobile. July 6-13

**FOR SALE**—Brand new 1904 White Steamer, with canopy top. C., care The Automobile. July 6-13

**FOR SALE**—Brand new Olds standard runabout, \$500. Jacob Roth, 1019 State st., Erie, Pa. July 6

**FOR SALE**—1903 Winton 20 H. P., good condition, \$500. New rear axle. D., care The Automobile. July 6-13

**FOR QUICK SALE**—\$825.00 4-cylinder 20 H.P., Touring Car, 5 passengers. Address Bargain, care Auto. July 20

**FOR SALE**—\$500.00 Knox 1903. Wheel steer, all in good order, tires good. F. N. Dounce, Elmira, N. Y. July 27

**FOR SALE**—Columbia electric surrey, mark XIX, perfect condition; bargain. P. O. Box 982, Buffalo, N. Y. July 13

**FOR SALE**—One Electric Delivery; two tops; cost \$2,500; first offer of \$500 takes it. Box 370, Harrisburg, Pa. July 6

**FOR SALE**—Oldsmobile light touring car; will carry five; in good condition. Price \$600. Box 250, Harrisburg, Pa. July 6

**FOR SALE**—Pierce Stanhope, 8-horsepower motor, with top, seats four, perfect condition, \$625. P. O. Box 982, Buffalo, N. Y. July 13

**FOR SALE**—Two new 1905 Yales; have not been run and are guaranteed; list \$1,100 each; make offer. Address "K," c/o Automobile. July 6

**FOR SALE**—Canop Top, 1904 Yale; in good running order; cost \$1,800; owner going abroad. Will sell cheap. Box 250, Harrisburg, Pa. July 6